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ABSTRACT

This document contains papers from 39 symposia as well as two town forum presentations and a poster session at the 1999 Academy of Human Resource Development (AHRD) conference. The town forum papers address certification in the human resource development (HRD) field. Symposium topics are as follows: (1) adult learning in the workplace; (2) advances in distance learning; (3) learning and working in groups; (4) workplace diversity issues; (5) learning organization issues; (6) managers and learning; (7) linking HRD theory and practice; (8) work force issues facing HRD; (9) enhancing employee skills; (10) instructional technology; (11) international HRD perspectives; (12) informal workplace learning; (13) organization structure and strategy; (14) university HRD programs; (15) HRD issues in Asia; (16) knowledge management; (17) facilitating organizational change; (18) evaluation in HRD; (19) new perspectives in HRD; development; (20) integrating learning and performance; (21) individual learning issues; (22) evaluating the impact of HRD; (23) HRD in the United Kingdom; (24) HRD professional development; (25) changing workplace; (26) measurement and research tools; (27) work force development; (28) individual differences in learning; (29) linking HRD practice and research; (30) contextual learning issues; (31) career issues in HRD; (32) assessing employee performance; (33) core directions in HRD; (34) cultural issues in organizations; (35) workplace learning issues; (36) transfer of learning; (37) change processes in organizations; (38) qualitative studies in HRD; and (39) interpersonal dynamics in the workplace. The poster session topic is new models and metaphors for human resource development. (SK)

ED 431 931

PROCEEDINGS

Of the

1999 AHRD Conference

Arlington, VA

March 3 – 7, 1999

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Proceedings Editor

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PROCEEDINGS

Of the

1999 AHRD Conference

Arlington, VA

March 3 – 7, 1999

Volume 1

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Proceedings Editor

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From the Editor

Welcome to Arlington and the 1999 AHRD conference. Our profession and the Academy continue to grow, and the quality and quantity of the papers and presentations at this conference attest to this fact.

The work presented in these Proceedings, 161 papers from scholars in 12 countries, is among the most current research available in the field today. You will be stimulated by the scholarly debate and dialogue these papers create.

Enjoy the conference and the Proceedings. Please give us your feedback and ideas for improvement so that we can make next year's conference even better. Take a minute and review the following tips on using the proceedings.

Using the Proceedings

1. This year, the Proceedings are bound and printed in two Volumes. The papers in each volume follow the conference program. Volume 1 contains papers for the Town Forum and Symposia 1 through 20. Volume 2 contains papers for symposia 21 through 39.

2. The Table of Content at the beginning of each volume covers both volumes. So does the Index of Authors and Keywords at the end of Volume 2.

3. The Conference Program is included in Volume 1, a short overview appears in both volumes.

4. As in previous years, papers are identified by Symposium number. In addition, the Proceedings have continuous page numbers.

5. The CD contains the entire Proceedings document, as well as the 1998 Cutting Edge Top 10 Research Papers and the AHRD Membership Directory.

My sincere thanks to all the authors, Rich Torraco, and Kit Arnett for their help and cooperation over the past three months. A special thanks also to Tim Wentling for making the resources available to complete these Proceedings. Finally, thanks to R. Luke Evans for his expert editing help and to Betsy Kuchinke for the fine graphic design work.

K. Peter Kuchinke
University of Illinois at Urbana-Champaign
Proceedings Editor

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Call for Papers

AHRD Research Conference 2000

Sheraton Imperial Hotel, Research Triangle Park, North Carolina

March 7 –12, 2000
Hosted by North Carolina State University

The Academy of HRD, an international organization having the mission of encouraging the systematic study of human resource development theories, processes, and practices, encourages you to submit proposals for the 2000 Annual Conference. All scholars interested in HRD are invited to submit proposals for consideration. The conference is attended by researchers and graduate students from the areas of HRD, business, psychology, education, economics, sociology, technology, and communication. In addition, HRD researchers and reflective practitioners from business, industry, and government participate fully in the conference.

Proposals may be submitted in three categories: Research and Theory Symposium, Innovative Session, and Poster. All proposals will be blind reviewed, and should be of new unpublished research. Papers accepted for the conference program will be published in the conference proceedings and may be published elsewhere following the conference. Authors may submit full manuscripts or proposals. Authors need to be aware that computers and projectors are not provided by the conference. Authors wishing to use computers and projectors must plan on providing them themselves

Proposal Requirements

Research and Theory Symposium

Full manuscripts (up to 20 pages) are strongly encouraged, but 5-6 page proposals are also accepted. Submissions should be new and unpublished. Research papers, as appropriate to the methodology used, should minimally contain the following elements:

1. Title
2. Problem statement
3. Theoretical framework
4. Research questions or propositions
5. Methodology and/or research design with limitations
6. Results and findings
7. Conclusions and recommendations
8. How this research contributes to new knowledge in HRD

AHRD also welcomes manuscripts presenting new scholarly theory, models, conceptual analyses, literature reviews, and case studies. While these papers may not yet offer results (#5 above) and conclusions (#6 above), they must otherwise follow the above requirements as closely as possible.

Proposal Requirements

Innovative Session

An innovative session is designed to present new and innovative HRD work through creative, interactive presentation formats that do not fit within the regular research and theory symposium process. Multiple papers will be considered, but one complete manuscript must be submitted for inclusion in the proceedings. Full manuscripts (up to 20 pages) are strongly encouraged, but 5-6 page proposals are also considered. The following criteria MUST be addressed and met in the proposal:

1. Title
2. Content of session with evidence that it is new, is innovative, addresses research or scholarship, and makes a substantive contribution to HRD knowledge
3. Description of format and style of presentation that is to be innovative, intellectually stimulating, generative of a high level of scholarly dialogue, and participative by both presenters and audience.
4. A timetable for how the 90-minute sessions will be filled.

Proposal Requirements

Posters

Posters are useful in presenting a theory or a model, though effective proposals have also been presented to use a variety of sessions to view the field of HRD in different ways. Posters are not a substitute for a scholarly paper. Posters will remain up throughout the conference, and a session will be scheduled to allow interaction between the author(s) and conference participants. The following criteria MUST be addressed and met in the proposal:

1. Title
2. No more than two, professional appearing, 2' x 3' poster boards that must be readable from a distance of six feet. Reduced copies of the poster boards should be included with the proposal.
3. An accompanying description of the poster that is not to exceed ten pages, which is to include the reduced copies of the posters. A 4-5 page proposal may also be submitted.
4. Reflective of a scholarly aspect of HRD.

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Submission Requirements

Proposals/manuscripts must meet the following:

1. Double-spaced in 12-point font
2. Should not exceed the page limits specified, including figures and references. Manuscripts that exceed the page limits will be returned. Shorter proposals will be accepted.
3. Blind review ready
   A. Cover sheet with author(s) identification
   B. No author identification in body, header or footer of manuscript
   C. Cover sheet should contain full identification and contact information for ALL authors
4. All communication with authors will be via Email. Proposal/manuscript submissions MUST INCLUDE AN E-MAIL ADDRESS FOR ALL AUTHORS, if possible, but at least one author who will then receive all communications.
5. All deadlines are firm. Exceptions will be made only for true emergencies or extraordinary circumstances.
6. All final manuscripts not forwarded by Emaill must include a disk copy in MS Word 6.0 (or later) format.

Submission Deadlines

1. Proposals/Manuscripts: **October 1, 1999**

2. Decision notification: **November 16, 1999**

3. Final Papers due to editor: **January 3, 2000**

(Limited to 8 single-spaced pages except for posters which is limited to four, including the reduced copy or photograph of the posters.)

Submission Addresses

Submission by email attachment is strongly preferred. Do not send duplicate manuscripts. If an email submission does not go through, you will be given time to submit a faxed or mailed copy of the manuscript.

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Manuscripts sent as email attachments should specify the word processing format

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1999 CONFERENCE OVERVIEW
Sheraton National Hotel ◆ Arlington, Virginia
March 3 - 7, 1999

The Academy of Human Resource Development

Developing Human Resources in a Global Community

Thursday, March 4	Time	Friday, March 5	Saturday, March 6	Sunday, March 7
Preconferences 12:00, Wednesday, March 3, 1999 through 12:00, Thursday, March 4, 1999	7:00 AM to 8:15 AM	Food-N-Thought Discussions (3), Join in! → Global 100 Breakfast and Meeting *EXHIBITORS OPEN*	Food-N-Thought Discussions (3), Join in! → Global 100 Breakfast and Meeting Foundation Board Breakfast	⊃ AHRD Board Breakfast Food-N-Thought Discussions (3), Join in!
⊃ IFAL- Action Learning ⊃ Performance in HRD ⊃ Integrity in HRD ⊃ Globalization in HRD	8:30 AM to 10:00 AM	***–Keynote Presentation–*** **Patricia A. McLagan** **Chairman,** **McLagan International** ***"Where to Now?"***	***–Keynote Presentation–*** **AHRD Professional Ethics Committee** ***Standards on Ethics and Integrity for the Academy of Human Resource Development***	**SYMPOSIUM** →Workplace Learning →Transfer of Learning →Change Processes →Research Forum →Qualitative Studies →Interpersonal Dynamics
Conference Registration Opens	10:15 AM to 11:45 AM	**SYMPOSIUM** →Adult Learning in the Workplace →*Innovative Session* *Scholar-Practitioner Perspectives* →Advances in Distance Learning →Learning and Working in Groups →Workplace Diversity Issues →Learning Organization Issues	**SYMPOSIUM** →Facilitating Organizational Change →Evaluation in HRD →New Perspectives in HRD →Academy Journals →Integrating Learning and Performance →*Innovative Session* *Integrating Technology*	***–Keynote Presentation–*** **Dr. Rosemary Harrison, UK Professor, consultant and author of "People and Organizations: Employee Development"** ***HRD and The Business: turbulence, turmoil and strategic direction***
12:00-5:00 AHRD Board of Directors Meeting 2:00-5:00 Local Tours	12:00 to 1:30 PM	**SYMPOSIUM** →Managers and Learning →Linking HRD Theory & Practice →Research Forum of Emerging Issues →*Innovative Session* *Workplace Spirituality* →*Poster Session* Food-N-Thought Discussions (3) Join in! Advances Editorial Board Meeting and Lunch	**SYMPOSIUM** →Individual Learning →Evaluating the Impact of HRD Impact →HRD in UK →HRD Professional Development →Changing Workplace Food-N-Thought Discussions (3) Join in! ASTD Research Committee/AHRD Board Luncheon	AHRD Business Meeting for all Academy members
3- 5:00pm Academic Showcase hosted by Va Tech and GWU 5:00pm - 6:00pm HRD Student Reception	1:45 PM to 3:15 PM	**SYMPOSIUM** →Workforce Issues Facing HRD →Enhancing Employee Skills →Instructional Technology →International HRD Perspectives →Informal Workplace Learning	**SYMPOSIUM** →Measurement and ResearchTools → Workforce Development →*Innovative Session* *Analyzing Performance Analysis* →Individual Differences in Learning → Linking HRD Practice and Research	Lunch and hotel checkout
6:00pm - 7:00pm Grand Reception & Conference Overview **7 - 8:30pm HRD Town Forum** **Certification of HRD Professionals, Products and Academic Programs:** **The Role of the Academy of Human Resource Development** 9:00pm HRDI Editorial Board Mtg. & Dinner	3:30 PM to 5:00 PM	**SYMPOSIUM** →Organization Structure and Strategy →University HRD Programs →HRD Issues in Asia →*Innovative Session* *Action Learning* →Knowledge Management	**SYMPOSIUM** →Contextual Learning Issues →Career Issues in HRD → Assessing Employee Performance →Core Directions in HRD → Culture Issues in Organizations	
	Evening Events	FREE EVENING 6:00pm HRDQ Editorial Board Mtg. & Dinner 6:00pm Global 100 Mtg. & Dinner	6:00-9:00pm President's Dinner & Awards Banquet for all conference attendees (included in registration)	

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IN APPRECIATION

Dear Academy Members,

A special thank you to the following volunteers for their contributions to the 1999 AHRD Conference! It is my sincere hope that the list is complete. Please take a moment to extend your gratitude to these fine professionals who have made this wonderful event possible.

Best Regards,

Gary McLean

Chair, 1999 AHRD Conference

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ROOM LEGEND FOR THE 1999 CONFERENCE

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to the Right of the Prefunction Foyer

Cavalier A = Cavalier Ballroom A
Cavalier B = Cavalier Ballroom B
Cavalier C = Cavalier Ballroom C

East Meeting Rooms
out the lobby doors opposite the Cavalier and Commonwealth Ballroom foyer, across the drive and through the set of double doors

East 1 = East Meeting Room 1
East 2 = East Meeting Room 2
East 3 = East Meeting Room 3

Commonwealth Ballroom
to the Left of the Prefunction Foyer

North 1 = Commonwealth BR 1
North 2 = Commonwealth BR 2
North 3 = Commonwealth BR 3
South = Commonwealth BR South

Commonwealth Ballroom and the Cavalier Ballroom share a common foyer

Foyer = Prefunction Foyer

Concourse Meeting Rooms
across from the Restaurant

Concourse 1 = Concourse 1
Concourse 2 = Concourse 2

Galaxy Meeting Room
On the top of the hotel

MANUSCRIPT REVIEW COMMITTEE

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Verna Willis
Albert Wiswell
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Carol Zulauf

Academy of Human Resource Development

VISION

To Lead the Human Resource Development Profession through Research

MISSION

The Academy was formed to encourage systematic study of human resource development theories, processes, and practices, to disseminate information about HRD, to encourage the application of HRD research findings, and to provide opportunities for social interaction among individuals with scholarly and professional interests in HRD from multiple disciplines and from across the globe.

PUBLICATIONS

AHRD in cooperation with our publishing partners, provides a full range of scholarly and professional publications:

1. *Human Resource Development Quarterly*, our research and theory journal
2. *Human Resource Development International*, our new international journal
3. *Advances in Developing Human Resources*, a quarterly monograph series scheduled to begin publication in time for our 1999 Annual Conference
4. *Human Resource Development Research Handbook*, a book for both researchers and practitioners
5. Blind Refereed Annual Conference Proceedings published annually in conjunction with the annual research conference

MEMBERSHIP BENEFITS

AHRD membership includes the following:

1. a subscription to all three AHRD sponsored scholarly journals:
   - ★ *Human Resource Development Quarterly*
   - ★ *Human Resource Development International*
   - ★ *Advances in Developing Human Resources*
2. being a member of the only global organization dedicated to advancing the HRD profession through research
3. annual research conference with full proceedings of research papers (900+) pages
4. subscription to *the Forum*, the academy newsletter
5. subscription to the Academy Listserv, for timely professional and career information
6. research partnering, funding, and publishing opportunities

ANNUAL RESEARCH CONFERENCE

AHRD holds an annual research conference in the early spring of each year. The 2000 conference will be hosted by North Carolina State University in Raleigh-Durham, North Carolina, USA. Don Martin will chair the 2000 conference site committee.

AWARDS PROGRAM

AHRD recognizes professional excellence in the HRD profession through its awards program, including:

- ★ Richard A. Swanson Award for Outstanding *HRDQ* Manuscript
- ★ Malcolm S. Knowles Dissertation of the Year Award
- ★ AHRD Outstanding Academic Program
- ★ HRD Book of the Year Award
- ★ Outstanding Scholar of the Year Award
- ★ Outstanding Human Resource Development International Manuscript

Presidents

1993-1994	R. Wayne Pace, Brigham Young University
1994-1996	Karen E. Watkins, University of Georgia
1996-1998	Richard A. Swanson, University of Minnesota
1998-2000	Elwood F. Holton, III, Louisiana State University
2000-2002	Gary N. McLean, University of Minnesota

AHRD Annual Conferences

1993	Austin, Texas
1994	San Antonio, Texas
1995	St. Louis, Missouri
1996	Minneapolis, Minnesota
1997	Atlanta, Georgia
1998	Chicago, Illinois
1999	Arlington, Virginia
2000	Raleigh-Durham, North Carolina

Academy Awards

Outstanding Scholar Award

1994	Fred Otte, Georgia State University
1995	Ronald L. Jacobs, Ohio State University
1996	Victoria J. Marsick, Columbia University
1997	Gary N. Mclean, University of Minnesota
1998	Not Given

Outstanding Academic Program Award

1994	University of Minnesota, Minneapolis, Minnesota
1995	University of Twente, The Netherlands
1996	Not given
1997	Georgia State University, Atlanta, Georgia
1998	University of Illinois at Urbana/Champaign, Champaign, Illinois

Malcolm S. Knowles Dissertation Award

A Tribute To
Dr. Malcolm Shepherd Knowles, 1913-1997
by Tim Hatcher

Widely regarded as the father (and as he described himself later in his life, the grandfather) of Adult Education, Dr. Malcolm was also a most influential force in the early development of what we know today as HRD. He epitomized the concepts of learning and the development of people. His long and influential life was dedicated to learning, caring about people, and developing a better society through the community of adult learners. He sparked a new field of inquiry and challenged all of us to develop a new way of thinking about how both adults and children learn. For these and many other accomplishments he deserves recognition as one of the founding fathers of HRD. For his many accomplishments as well as his dedication to his students, the Malcolm S. Knowles Dissertation Award was inaugurated at the 1997 AHRD Annual Conference.

Malcolm S. Knowles Research Fund

AHRD has established a fund-raising effort in his name to support doctoral students in HRD. The fund has already received $1,000 in anonymous contributions and we are anxious to raise more. The funds will create an endowment, the earnings from which will be used to: (1) pay for the dissertation award, (2) offer grants to support dissertation research, and (3) offer travel support and a stipend to dissertation award winners.

WE NEED YOUR CONTRIBUTIONS

All contributions to AHRD are tax-deductible and can be sent to the AHRD office. Remember, all funds will be used to encourage high quality doctoral student research in HRD. *Our goal is to have at least $25,000 in the fund by the end of 1999 so we can offer our first grants in 2000.*

Please consider a contribution of any amount.

Knowles Dissertation Award Recipients

1996	*The Effect of a Perceived Leadership Style on Subordinates Information Seeking Behavior: A Transformational and Transaction Leadership Theories Perspective* Svjetlana Madzar, University of Minnesota
1997	*Managers as Facilitators of Learning in Learning Organizations* Andrea Ellinger, University of Georgia

Richard A. Swanson Research Excellence Award

Awarded for the best refereed manuscript published in *Human Resource Development Quarterly* for the Volume indicated.

Volume 1 1991	*QWL Improves Worksite Quality: Success Rates in a Large Pool of Studies* Robert T. Golembiewski, University of Georgia Ben-Chu Sun, National Cheng-Chi, Taiwan
Volume 2 1992	*Organizational Training and Signals of Importance: Linking Pretraining Perceptions to Intentions to Transfer* Timothy Baldwin, Indiana University Richard Magjuka, Indiana University
Volume 3 1993	*A Case Study in Forecasting the Financial Benefits of Unstructured and Structured On-the-Job Training* Ronald Jacobs, Ohio State University Michael Jones, Kenworth Truck Company Sue Neil, Paccar, Inc.
Volume 4 1994	*The Relationship Between Organizational Transfer Climate and Positive Transfer of Training* Janice Rouiller, ASTD Irwin Goldstein, University of Maryland
Volume 5 1995	*Augmenting Behavior-Modeling Training: Testing the Effects of Pre- and Post-Training Interventions* Jon Werner, University of South Carolina Ann O'Leary, Texas A&M University Timothy T. Baldwin, Indiana University Kenneth N. Wexley, Human Resources Decisions, Inc.
Volume 6 1996	*Managerial Behaviors and Workgoup Climate as Predictors of Employee Outcomes* Allan H. Church, W. Warner Burke and Associates
Volume 7 1997	*How Executive Women Learn Corporate Culture* Laura Bierema, Michigan State University

Outstanding HRD Book of the Year

1997	*Building the Learning Organization* Michael J. Marquardt George Washington University, Washington, DC
1998	*Corporate Creativity: How Innovation and Improvement Actually Happens* Alan G. Robinson, University of Massachusetts, Boston, MA Sam Stern, Oregon State University, Eugene, Oregon

Cutting Edge Table of Contents for the Ten Best Papers from the 1998 AHRD Conference Proceedings

Selected by review team chaired by Wim J. Nijhof, University of Twente, The Netherlands, Editor

Impact Evaluation of Strategic HRD Interventions

The Politics of Program Evaluation and the Misuse of Evaluation Findings 6 - 12
Hallie M. Preskill, University of New Mexico
Robin Lackey, University of New Mexico

Investments in Intellectual Capital: Developing Methods for Measuring Impact and Value of HRD 13 - 19
Lauri J. Bassi, American Society for Training and Development
Mark E. van Buren,American Society for Training and Development

Strategic HRD Alignment and HRD Effectiveness 20 - 28
Ida A.M. Wognum, University of Twente, The Netherlands
Roel J. Bosker, University of Twente, The Netherlands

Examining Construct Validity of Dimensions of the Learning Organization Questionnaire 29 - 36
Baiyin Yang, Auburn University
Karen E. Watkins, University of Georgia
Victoria J. Marsick, Columbia University

Leadership Effects of Decision Making

Leaders Behaving Badly: How to Block Innovation in Organizations 37 -43
Darlene F. Russ-Eft, AchieveGlobal, Inc.

Mid-Stream Corrections: Decisions Leaders Make During Organizational Change Processes 44 - 50
David W. Frantz, Purdue University

Organizational Memory and Scripts: Sources of Resistance to Change or Sources of Lessons from the Past? 51 - 59
Suzanne L. Geigle, George Washington University

Leadership and Culture: Work-Related Values and Leadership Styles among U.S. and German Employees 60 - 67
K. Peter Kuchinke, University of Illinois at Urbana Champaign

Behaviors Related to Perceptions of Leadership in Self-directed Project Groups 68 - 75
Judith A. Kolb, Pennsylvania State University

Moderators of Managerial Behavior Ratings: An Analysis from Multiple Perspectives 76 - 83
Allan H. Church, W.Warner Burke Associates Inc.

A copy of the 1998 Top Ten Proceedings Papers is on your 1999 Conference CD.

1998 "Cutting Edge" Selection Committee

Chair: Wim Nijhof, University of Twente, The Netherlands
Reid A. Bates, Louisiana State University
Scott Johnson University of Illinois at Urbana/Champaign
Gary L. Selden, Kennesaw State University
Anders Vind, University of Aalborg, Denmark

WEDNESDAY, MARCH 3
Preconference Activities

8:30am to 5:00pm — **CONFERENCE CENTRAL AND REGISTRATION OPEN** — *Foyer*

12:00 to 5:00 — **PRECONFERENCE - Action Learning in the New Millenium** — *Cavalier B and Cavalier C*
International Federation for Action Learning (IFAL)
Chair: Judy O'Neil, Northeast Training Services, IFAL President

This preconference explores three learning strategies in research and practice of action learning: 1) individual learning; 2) organizational learning; 3) global human resource development. As a practitioner, scholar, researcher, or student, you can: 1) participate in discussions of the concepts of action learning and related learning strategies; 2) explore insights of critical issues to advance action learning in the new millennium through work in action learning groups

12:00 to 5:00 — **PRECONFERENCE - Performance through HRD** — *North1 North 2 North 3*
Chair: Reid A. Bates, Louisiana State University

One of our biggest concerns (in theory, practice, and research) in Human Resource Development and Performance Improvement is 'performance', how to define it, measure it, its implications for organizations, HRD/PI practice, and so on. The goal for this year's preconference is to take an ambitious look at issues related to valuing and assessing performance in organizations. A panel of experts from public and private sector organizations will participate in a round-table discussion to explore with pre-conference participants a number of issues critical to assessing and valuing performance in organizations.

12:00 to 5:00 — **PRECONFERENCE - Integrity through HRD** — *Cavalier A*
Chair: Neal Chalofsky, George Washington University

The 1999 conference will feature the 3rd annual integrity preconference entitled ***Integrity at Work: Bridging the Gap between Theory and Practice.*** *George Washington University's Forum for the Meaning of Work will focus on research governing the meaning of work and individuals' pursuit of fulfillment in the workplace. Our goal is to discuss the state of research in this area and the implications for practice, as well as for further research and theory building. We are inviting others who have been conducting research in this area, have ideas to contribute, or would like to participate in other ways.*

12:00 to 5:00 — **PRECONFERENCE - Issues in Global HRD** — *Concourse 1 and Concourse 2*
Co-Chair: Lex Dilworth, Virginia Commonwealth University
Co-Chair: Verna J. Willis, Georgia State University

This Second Annual Global HRD Preconference will take as its theme Issues In Global HRD. Drawing from issues obtained from four corporations, the preconference will establish a framework for understanding Global HRD. Subgroups will meet during a portion of the preconference around Global HRD Issue Clusters, so that individuals will be able to focus on issues of greatest importance to them.

THURSDAY, MARCH 4
Preconference Activities

7:00am to 8:00pm	**CONFERENCE CENTRAL, REGISTRATION AND EXHIBITS OPEN**	*Foyer*
8:00 to 12:00	**PRECONFERENCE - Action Learning in the New Millenium continued** **International Federation for Action Learning (IFAL)** **Chair: Judy O'Neil, IFAL President**	*Cavalier B and Cavalier C*
7:15 to 12:00	**PRECONFERENCE - Performance through HRD continued** **Chair, Reid Bates, Louisiana State University**	*North1* *North 2* *North 3*
8:30 to 12:00	**PRECONFERENCE - Integrity through HRD continued** **Chair: Neal Chalofsky, George Washington University**	*Cavalier A*
8:00 to 12:00	**PRECONFERENCE - Issues in Global HRD continued** **CoChair: Lex Dilworth, Virginia Commonwealth University** **CoChair: Verna Willis, Georgia State University**	*Concourse 1 and Concourse 2*
12:00 to 2:00	**Lunch on your own**	
12:00 to 5:00	**AHRD Board of Directors Meeting**	*East 3*
2:00 to 5:00	**AFTERNOON WARM-UPS** **Explore Washington D.C.!** Visit the Hospitality table in the Registration area for information on quick trips into the city and surrounding areas. The Capitol Hill and Smithsonian Museums Old Town Alexandria Historic Georgetown **Site Host Showcase** - continuous touch-screen kiosk to learn about George Washington University and the Virginia Polytechnic Institute and State University, your site hosts.	*Foyer*
5:00 to 6:00	**HRD Student Reception** **Hosted by George Washington University and Virginia Polytechnic Institute and State University**	*Galaxy*

THURSDAY, MARCH 6

MAIN CONFERENCE OPENS

6:00 to 7:00

Opening Reception — *North Ballroom*

All registered attendees are invited

7:00 to 8:30

HRD Town Forum - An AHRD Tradition — *South Ballroom*

Certification of HRD Professionals, Products and Academic Programs: The Role of the Academy of Human Resource Development

HRD Certification: A Strategy for Leading the Profession through Research

Catherine M. Sleezer, Oklahoma State University

Certification of HRD Professionals, Products and Academic Programs: The Role of AHRD

Michael Leimbach, Wilson Learning Corporation, AHRD Global 100 Member

Moderator: ***Jamie Callahan Fabian, Virginia Polytechnic Institute and State University***

8:30pm to 8:45pm

Meeting of All Symposium and Innovative Session Chairs — *South Ballroom*

9:00pm to 11:00

Human Resource Development International Editorial Board Meeting — *Hotel Dining Room*

AHRD Salutes Our Partners

Our special thanks to these outstanding organizations who have joined with AHRD to help lead the Human Resource Development Profession through Research

American Society for Training and Development

Berrett-Koehler Publishing

Business Outreach

EURESFORM

International Federation for Action Learning

Jossey-Bass Publishers

Routledge Press

University Forum for HRD

FRIDAY, MARCH 5

7:00am to 6:00pm — **CONFERENCE CENTRAL, REGISTRATION, AND EXHIBITS OPEN** — *Foyer*

Food 'n Thought Discussions — *Concourse 1 and Concourse 2*

Pull up a chair to meet and dialogue with any of these groups

7:00am to 8:15am

Book Review: Action Learning in Action

Michael Marquardt

Facilitators: *MD Yusoff, Michigan State University and Michael Marquardt, George Washington University*

Book Review: *Organizing Work Related Learning Projects: A Network Approach*

Rob R. Poell, KUN Education Department

Facilitators: *Rob R. Poell, KUN Education Department, Judy Milton, University of Georgia and Michael J. Davis, University of Manchester*

Book Review: *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development*

Malcolm S. Knowles, Elwood F. Holton III, Richard A. Swanson

Facilitators: Doug Smith, Florida International University and Elwood F. Holton III

FRIDAY, MARCH 5

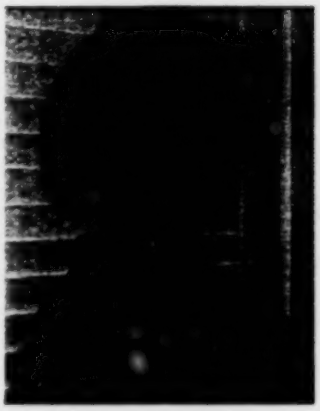
8:30 to 10:00 — South Ballroom

Keynote Presentation

Patricia A. McLagan, Chairman, McLagan International, Inc.

Many forces are changing the shape of work and learning in the world. Some are global and sociological, some technological, some intellectual, and some psychological. There are forces we have created as we've developed the HRD field. The very nature of work, the definition of "organization," the role of people and work continue to make dramatic tectonic shifts. Who is teacher? Who is learner? Who is manager?...and who the worker? How do HRD thought leaders and communicators prepare to be a future force while we - like the people we are supporting - navigate in the same blinding storm as they? What should we be doing? Learning? Creating as possibilities?

In this session, Pat McLagan will explore and discuss the implications of the above kinds of questions. If you can, prepare mentally by thinking about what your vision of the future for HRD- say, 10 years from now - is. What features would you like HRD to have? What legacy are you creating as we move into the next millenium?



Pat McLagan is Chairman of McLagan International, Inc. in the USA and South Africa. She is a graduate, Phi Beta Kappa, from the University of Minnesota with a BA in English Literature and an MA in Adult Education/minor Industrial Relations. She is a part-time professor at Rand Afrikaans University in South Africa, with responsibilities for a Masters Module in Human Resources Management and as an advisor on the overall program and strategy of the HRM faculty. She is a member of the Board of Governors of the American Society for Training and Development and is a former member of the Cabinet of the Minneapolis United Way and the Board of the Instructional Systems Association. She has been awarded the highest award given by the 30,000 member American Society for Training and Development, is the 15th member and the 2nd woman to be inducted into the International HRD Hall of Fame, and is a 1998 inductee into the International Adult and Continuing Education Hall of Fame

Moderator: ***Timothy G. Hatcher***
University of Louisville

10:00 to 10:15 — South Ballroom

Refreshment Break

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10:15 - 11:45 AM - CONCURRENT SYMPOSIUM SESSIONS

1 **Adult Learning in the Workplace** *North 1*

Chair: Teresa Palmer, Illinois State University

1 - 1 Relationship Between Workplace Learning and Employee Satisfaction in Small Businesses
Robert W. Rowden, Mercer University
Shamsuddin Ahmad, Mercer University

1 - 2 Reframing the Andragogical Model of Adult Learning
Elwood F. Holton III, Louisiana State University
Richard A. Swanson, University of Minnesota

1 - 3 A Holistic Model of Knowledge and Adult Learning
Baiyin Yang, University of Idaho

1 - 4 The Nature of Adult Workplace Curiosity
Thomas G. Reio, Jr., University of Maryland

Innovative Session **Scholar-Practitioner's Perspective on the Application of HRD in the Workplace** *Cavalier C*

This session will provide different perspectives on the application of HRD in the workplace from five scholar-practitioners. Panelists who are members of the AHRD Global 100 will share their views on HRD research and practice. Each perspective will be an interactive conversation between the panelist and all those attending the session. An opportunity will be provided for networking among panelists and participants. This session is designed to generate a high level of participation and scholarly dialogue among all in attendance.

Panelists and Their Perspectives:

Marcia A. Marriott, Independent Consultant and University Professor

Gary L. May, Milbrook Distribution Services, Chief Learning Officer (CLO)

Joel Montgomery, Metalearning.com, LLC, Human Performance Consultant for a Global Consulting Firm

David J. Sisson, Airliance Materials, Llc, CEO of a Mid-sized Business

Nancy Snyder, Whirlpool Corporation, Human Resource Leadership Position at a Major International Corporation

Global 100

AHRD

Do You Know About the AHRD Global 100?

The AHRD Global 100 is a special group of HRD leaders who are reflective practitioners dedicated to linking their practice to HRD research and theory. By joining the AHRD Global 100, these members and their companies are making a public commitment to advancing the HRD profession through research.

Researchers: *Attend Innovative Session on Friday, 10:15 in Cavalier C to explore the scholar-practitioner view of AHRD's role*

Practitioner-scholars*: Want to help set the research agenda? Interact with leading thinkers in HRD? Partner with HRD researchers? Then join the AHRD Global 100.*

UUL 26

10:15 - 11:45 AM - CONCURRENT SYMPOSIUM SESSIONS

2 **Advances in Distance Learning** *North 3*

Chair: Martin Mulder, University of Twente, The Netherlands

2 - 1 The Adoption of Computer Technology and Telecommunications: A Case Study

Larry M. Dooley, Texas A&M University

Teri Metcalf, Texas A&M University

Ann Martinez, Texas A&M University

2 - 2 Distance Education: Examining Emerging Standards and Instructional Practice via Videotaped Content Analysis

Carmeta Tate-Blake, Florida International University

Jo D. Gallagher, Florida International University

Douglas H. Smith, Florida International University

2 - 3 Critical Components of Distance Education Partnerships between Two-year Colleges and Business and Industry

Edward Raspiller, Northern Illinois University

2 - 4 Comparative Analysis of Online vs. Face-to-Face Instruction

Scott D. Johnson, University of Illinois at Urbana/Champaign

Steven R. Aragon, University of Illinois at Urbana/Champaign

Nilda Palma-Rivas, University of Illinois at Urbana/Champaign

Najmuddin Shaik, University of Illinois at Urbana/Champaign

Norm Bilsbury, University of Illinois at Urbana/Champaign

3 **Learning and Working in Groups** *North 2*

Chair: Allan H. Church, W. Warner Burke and Associates, Inc.

3 - 1 Collaborating in Public with the Opposition: A Study of the Complex Meaning of Learning in a Cross Boundary Work Group

Marjorie H. Carkhuff, Educational Strategy Consultant

3 - 2 Designing Dispute Management Systems

Douglas A. Benson, University of Minnesota

3 - 3 What's New in Teams?

Lilanthi Ravishankar, AchieveGlobal, Inc.

3 - 4 Application and Test of a Model of Team Effectiveness to Self-Managing Interdisciplinary Psychiatric Treatment Teams

Reid A. Bates, Louisiana State University

10:15 - 11:45 AM - CONCURRENT SYMPOSIUM SESSIONS

4 **Workplace Diversity Issues** *Cavalier A*

Chair: Robert L. Dilworth, Virginia Commonwealth University

4 - 1 Expanding Theories of Career Development: Adding the Voices of African American Women in the White Academy

Mary V. Alfred, Central Texas College

4 - 2 The Role of Human Resource Development in the Successful Transition of Minority Youth into the Workplace

Rose Mary Wentling, University of Illinois at Urbana/Champaign

Consuelo Waight, University of Illinois at Urbana/Champaign

4 - 3 Relationship Between Selected Variables on Diversity and the Implementation of Diversity as Successful Corporate Culture Change Programs

Clarence E. Whittenberg, Sealed Air Corporation

Melissa H. Marcus, Clemson University

Dennis G. Tesolowski, Clemson University

Clinton H. Isbell, Clemson University

4 - 4 Diversity Practitioners—Learning From Experience! Defining the Role and Related Competencies in an Emerging Field of Practice

Terrence E. Maltbia, Columbia University

5 **Learning Organization Issues** *Cavalier B*

Chair: Sharon J. Confessore, George Washington University

5 - 1 How Action Learning Builds the Learning Organization: Conceptual Analysis

Michael J. Marquardt, George Washington University

Ty Alexander, Empire BlueCross BlueShield

5 - 2 Enhancing Individual and Organizational Learning: A Sociological Model

Andrea Casey, George Washington University

5 - 3 Predictors of Learning Organizations: A Human Resource Development Practitioners Perspective

Orlando V. Griego, Colorado State University

Gary D. Geroy, Colorado State University

5 - 4 Action Learning and Systems-level Continuous Learning

Judy A. O'Neil, Partners for the Learning Organization

DON'T FORGET TO VISIT THE AHRD BOOKSTORE LOCATED IN CONFERENCE CENTRAL IN THE PREFUNCTION FOYER

FRIDAY, MARCH 5

12:00 to 1:30pm

Food 'n Thought Discussions Pull up a chair to meet and dialogue with any one of these groups

Concourse 1 and Concourse 2

Book Review: ***Web-Based Training: Using Technology to Design Adult Learning Experiences***
Margaret Driscoll
Facilitators: *Millicent Adu-H'Torah, Oklahoma State University*

Book Review: ***Results: How to Assess Performance, Learning and Perceptions in Organizations***
Richard A. Swanson & Elwood F. Holton, III
Facilitators: *Peter Dean, University of Tennessee*

Book Review: ***ASTD Models for Workplace Learning and Performance: Roles, Competencies, and Outputs***
William J. Rothwell, Ethan S. Sanders, and Jeffrey G. Soper
Facilitators: *Carson R. Arnett, Louisiana State University*

12:00 to 1:30pm

Advances in Developing Human Resources **Editorial Board Meeting**
Chair: Richard A. Swanson, University of Minnesota, Editor-in-Chief

East 3

FIRST ISSUE OF ADVANCES IN YOUR REGISTRATION PACKET

Advances in Developing Human Resources

Editor-in-Chief
Richard A. Swanson
University of Minnesota

New Topical Mongraph from the Academy of Human Resource Development

Included in AHRD membership dues
Published by Berrett-Koehler Communications

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FRIDAY, MARCH 5

12:00 - 1:30 PM - CONCURRENT SYMPOSIUM SESSIONS

6 **Managers and Learning** *North 3*

Chair: Val Kosky, College of St. Catherine

6 - 1 Expatriate Managers and HRD: The Missing Link
Teresa Palmer, Illinois State University
Iris I. Varner, Illinois State University

6 - 2 Managerial Practices to Facilitate Learning Within Learning Organizations
Andrea D. Ellinger, Pennsylvania State University

6 - 3 Operationalizing the Organizational Model of Managerial Employee Persistence
Lisa Hanes Netzley, University of Minnesota
Shari L. Peterson, University of Minnesota

6 - 4 Critical Thinking, Developmental Learning, and Adaptive Flexibility in Organizational Leaders
Robert Duchesne, Eastern Connecticut State University

7 **Linking HRD Theory and Practice** *North 2*

Chair: Chris R. Hardy, Innolog Corporation

7 - 1 Reorienting the Theoretical Foundations of Human Resource Development: Building a Sustainable Profession and Society
Timothy G. Hatcher, University of Louisville

7 - 2 Towards a Philosophical Framework for Thought and Practice
Wendy E.A. Ruona, University of Minnesota
Susan A. Lynham, University of Minnesota

7 - 3 The Need for Theoretical Model Building in HRD
Tom Shindell, Northeastern Illinois University

7 - 4 Bridging the Gap with a Multidimensional Performance Model
Susan Reynolds Fisher, Oklahoma State University
Catherine M. Sleezer, Oklahoma State University

Research Forum **Research Forum of Emerging Issues** *North 1*

Chair: Gene L. Roth, Northern Illinois University

Building Civility in the Workplace: A Model of Ethical HRD Intervention
Marc Porter, University of Georgia

Aesthetic Espistemology: A Proposed Framework for Research in Human Resource Development
Nick Nissley, Antioch University

Community College Female Faculty Presentation Skills Training
Barbara Heller Frey, Pennsylvania State University

Keeping a Psychological Perspective in HRD Programs
Shanae Ellsworth, Antioch University Seattle

The Global Success Model - A Systems Approach for Globalizing an Organization
Michael Marquardt, George Washington University

New Partnerships in Welfare to Work Programs: The TekAid Case Study
Letitia Combs, Virginia Polytechnic Institute and State University

12:00 - 1:30 PM - CONCURRENT SYMPOSIUM SESSIONS

Innovative Session

Beyond the Rhetoric: What Do We Really Mean by a Spirituality of Work — Cavalier A

This session will generate scholarly dialogue about the spirituality of work based on the following questions. What do we mean by a spirituality of work? Can a spiritual approach to work be made compatible with the profit motive that has become the dominant purpose of work life? Are we really experiencing change, a "new paradigm," in the underlying values and assumptions that affect work life, or is the spiritual rhetoric nothing more that one more "value-added" strategy to control, manipulate, or extract more from the worker? What role or place does spirituality have in the research and practice of HRD? How does it promise to shape or influence how we think about and what we do in HRD? Using the critical incident technique and group discussion, this session is designed to generate a high level of participation and scholarly dialogue about the spirituality of work among panelists and participants.

Panelists:

Jeri Darling, Darling Consulting

Terri A. Deems, Worklife Design

John M. Dirkx, Michigan State University

Krista Kurth, Renewal Resources, LLC

Fred M. Schied, Pennsylvania State University

Poster Session

New Models and Metaphors for Human Resource Development — Cavalier B

This session will present visual representations of new ideas and models in HRD. Using posters as the basis of scholarly dialogue, this session will engage participants in reflection, interpretation, and discussion of new models and metaphors for HRD. The presenters listed below will be present at this session to discuss their work and facilitate scholarly dialogue based on their posters.

Two-way Customer Service Provider Cycle

Harriet V. Lawrence, Management By Communication

Albert K. Wiswell, Virginia Polytechnic Institute and State University

Using Art to Explore a Metaphor for the Training Process

Darren Short, Office for National Statistics, United Kingdom

Summaries and sample art work from the posters can be found in the back of your 1999 Proceedings.

HUMAN RESOURCE DEVELOPMENT RESEARCH HANDBOOK

"If research is the seed, this book is the tool to till the soil"

Ken Melrose, Chairman & CEO, The Toro Co.

Sponsored by
Academy of Human Resource Development &
American Society for Training and Development

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1:45 - 3:15 PM - CONCURRENT SYMPOSIUM SESSIONS

8 **Workforce Issues Facing HRD** *Cavalier B*

Chair: Kimberly McDonald, Indiana University-Purdue University

8 - 1 Contributing Factors to the Success of Women and People of Color in Leadership Roles: A Message to HRD Professionals

Jean McFarland, G P Morgan and Associates, Inc.

Gary Leske, University of Minnesota

Caroline V. Tur[illegible]r, University of Minnesota

8 - 2 A Qualitative Assessment of Office Design Perceived by Older and Younger Workers to Impact Work

Virginia Kupritz, University of Tennessee

8 - 3 Consequences of Part-time Work for the Full-time Coworkers: Procedural Fairness in Human Resources and Employee Reactions

Shannon L. Palmer, University of Maryland

8 - 4 Disability Disclosure, Recruitment Interviews, and the Employment Process

Tonette S. Rocco, Ohio State University

9 **Enhancing Employee Skills** *North 2*

Chair: Julie A. Furst-Bowe, University of Wisconsin-Stout

9 - 1 The Effect of Study Skills Training Intervention on United States Air Force Aeromedical Apprentices

John C. Griffith, U.S. Air Force

9 - 2 Helping Employees Develop Computer Skills While at Work: An Exploratory Story

Henriette M. Pranger, Quinebaug Valley Community Technical College

9 - 3 Defining Core Problems for on the Job Training: an Example from the Car Repair Trade

Simone Van Zolingen, University of Twente, The Netherlands

Jan Streumer, University of Twente, The Netherlands

9 - 4 How Can Firms Improve Sales Performance?

Camille M. Busette, AchieveGlobal, Inc.

10 **Instructional Technology** *North 1*

Chair: Scott D. Johnson, University of Illinois at Urbana/Champaign

10 - 1 Performance and Learning Support with On-Line Help Systems: An Effectiveness Study

Theo J. Bastiaens, Open University Netherlands

Jan N. Streumer, University of Twente, The Netherlands

Yvette Krul, Origin Human Performance Consulting

10 - 2 Using Participatory Action Research to Investigate the Process of Designing and Developing Web-Based Instruction (WBI)

Margaret L. Bailey, Northern Illinois University

Lorraine M. Hahn, Northern Illinois University

10 - 3 Readiness of HRD Professionals to Engage in Online Instruction

Chanidprapa Suriya, University of Illinois at Urbana/Champaign

Tim L. Wentling, University of Illinois at Urbana/Champaign

10 - 4 Motivating Community College Instructors to Teach On-line: An Exploration of Selected Motivators

James J. Kirk, Western Carolina University

Harold Shoemaker, Indiana State University

1:45 - 3:15 PM - CONCURRENT SYMPOSIUM SESSIONS

11 **International HRD Perspectives** *North 3*

Chair: AAhad M. Osman-Gani, Nanyang Technological University

11 - 1 Towards a Meaningful HRD Function in the Post-Command Economies of Central and Eastern Europe
Devi Jankowicz, University of Teesside, United Kingdom

11 - 2 The Impact of Human Resource Development on the Winter War between Finland and the Soviet Union in 1939-1940
John A. Niemi, Northern Illinois University
Ville Nurmi, Finnish Institute of Occupational Health

11 - 3 Designing Effective Training Programs for International Transfer
Doo H. Lim, Indiana State University

11 - 4 Cross-Cultural Effectiveness: A Case Study of Cultural Conflict Incidents
Carey C. Coghill, Coghill and Beery International

12 **Informal Workplace Learning** *Cavalier A*

Chair: Margaret Lohman, University of Iowa

12 - 1 Re-conceptualizing Marsick and Watkins' Model of Informal and Incidental Learning in the Workplace
Maria Cseh, Oakland University
Karen E. Watkins, University of Georgia
Victoria J. Marsick, Columbia University

12 - 2 Creativity and Design
Sharon J. Korth, Xavier University
Brenda S. Gardner, Xavier University

12 - 3 Contradictory Practices: Critical Feminist Perspectives on HRD and Workplace Learning
Sharon L. Howell, Pennsylvania State University
Vicki K. Carter, Pennsylvania State University
Fred M. Schied , Pennsylvania State University

12 - 4 Self and Team Development in Practice (STP) Walk Rally
Chiraprapha Tan Akaraborworn, University of Minnesota
Gary N. McLean, University of Minnesota

3:15 to 3:30 **Refreshment Break** *South Ballroom*

3:30 - 5:00 PM - CONCURRENT SYMPOSIUM SESSIONS

13 **Organization Structure and Strategy** *North 3*

Chair: Marijke T. Kehrhahn, University of Connecticut

13 - 1 Human Resource Development's Contribution to Strategic Service Quality Performance in Radisson Hotels Worldwide

Richard A. Swanson, University of Minnesota
Arthur V. Hill, University of Minnesota
Susan Geurs, Radisson Hotels Worldwide
Julie M. Hays, University of Minnesota
George John, University of Minnesota
David W. Johnson, University of Minnesota

13 - 2 Mastering Turbulent Growth: A Growth Audit at a Major Pharmaceutical Research Center

Michael Leimbach, Wilson Learning Corporation
Meredith Ceh, Wilson Learning Corporation

13 - 3 A Study of the Role of HRD in Response to External Environmental Change in Public Service Organizations

Kenneth R. Bartlett, University of Illinois at Urbana/Champaign

13 - 4 Operationalizing Alignment: Testing Alignment Theory

Steve W. Semler, Personnel Decisions, Inc.

14 **University HRD Programs** *North 2*

Chair: Rose Mary Wentling, University of Illinois at Urbana/Champaign

14 - 1 Developing A Competency-Based Exam for an HRD Graduate Program

Diane B. Ehrlich, Northeastern Illinois University

14 - 2 Scaling the Walls of Academic Silos: The Birth of a Cross-disciplinary Academic HRD Program

Ann K. Brooks, University of Texas-Austin
Kathleen Edwards, University of Texas-Austin
Alison Davis-Blake, University of Texas-Austin

14 - 3 An Examination of Teaching Pedagogies in Entrepreneurship Education: An Historical Examination

Ayman Tarabishy, George Washington University
Erik K. Winslow, George Washington University
George T. Solomon, George Washington University

14 - 4 Improving Post-Training Performance through Online Peer Learning and Distance Mentoring

Scott D. Johnson, University of Illinois at Urbana/Champaign
Tim L. Wentling, University of Illinois at Urbana/Champaign
Andrew J. Wadsworth, University of Illinois at Urbana/Champaign

3:30 - 5:00 PM - CONCURRENT SYMPOSIUM SESSIONS

15 **HRD Issues in Asia** *Cavalier B*

Chair: Valeria Stokes, Acco International, Inc., Global 100 Member

15 - 1 The History of Human Resource Development in Taiwan from 1949 to 1999

Christine M. Kuo, University of Minnesota

Gary N. McLean, University of Minnesota

15 - 2 Expatriate Development for the Asia-Pacific Region: A Comparative Analysis of Expatriates from Five Countries Across Three Continents

AAhad M. Osman-Gani, Nanyang Technological University, Singapore

15 - 3 Development of a Framework for Emerging Asian MNC and a Model for Promising Local Enterprises To Migrate onto the 'MNC Curve': An International HRD Prospective

Gerald Z. D. Huang, Nanyang Technological University, Singapore

15 - 4 The Framework and Practices of Cross-cultural Training in Taiwanese Corporations

Hsinyi Chen, National Dong Hwa University, Taiwan, R. O. C.

Menling Wu, National Central University, Taiwan, R. O. C.

Innovative Session **Action Learning in the New Millennium** *Cavalier C*

This session includes interactive segments on six different applications of action learning. Segment topics will include action learning as a global HRD strategy, the influence of the International Foundation for Action Learning (IFAL), action learning in corporate America, action learning as an individual learning and change strategy, outcomes of the 1999 Action Learning Pre-conference, and new directions for research on action learning. This session is designed to generate a high level of participation and scholarly dialogue among panelists and participants.

Panelists:

Laura L. Bierema, Michigan State University

Suzanne D. Butterfield, Georgia State University

Joel Montgomery, MetaLearning Com, LLC

Judy A. O'Neil, Partners for the Learning Organization, Inc.

16 **Knowledge Management** *North 1*

Chair: Gary L. May, Millbrook Distribution Services

16-1 Knowledge Management and Knowledge Dissemination

Wim J. Nijhof, University of Twente, The Netherlands

16-2 A Theory of Knowledge Management

Richard J. Torraco, University of Nebraska

16-3 Signposts on the Road to Knowledge Management

Allison Rossett, San Diego State University

James Marshall, San Diego State University

16-4 The Relationship between Human Resource Development and Business Strategy in 1998 Fortune 500 Companies

Erica D. Kalata, University of Illinois at Urbana/Champaign

Tim L. Wentling, University of Illinois at Urbana/Champaign

6:00pm **HRDQ Editorial Board Meeting and Dinner** *East 3*

6:00pm **AHRD Global 100 Meeting and Dinner** *TBA*

SATURDAY, MARCH 6

7:00am to 6:30pm — **CONFERENCE CENTRAL, REGISTRATION, AND EXHIBITS OPEN** — *Foyer*

7:00 to 8:15 — **Food 'n Thought Discussions** Pull up a chair to meet and dialogue with any one of these groups — *Concourse 1 and Concourse 2*

Discussion Group: Outsourcing HRD

Facilitator: *Darren Short, Office of National Statistics, United Kingdom*

Book Reviews: ***Effective Training Strategies,*** Jim and Adelaide Davis

50 Ways to Teach Your Learner, Ed Rose

Facilitators: *Adelaide Davis, University of Denver and Tom Shindell, Northeastern Illinois University*

Book Reviews: **How to Conduct Surveys** Arlene Fink and Jacqueline Kosecoff

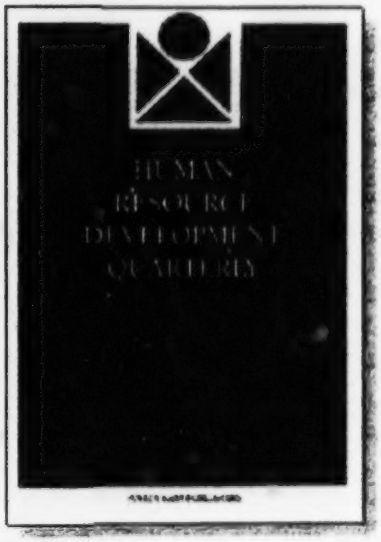
Designing and Using Surveys, Janine Waclawski and Allan H. Church

Facilitators: *Debra Gutierrez, Oklahoma State University and Allan H. Church, W. Warner Burke and Associates, Inc.*

Breakfast Meeting - AHRD Global 100 — TBA

7:00 to 8:15 — **AHRD Foundation Board Meeting**

Chair: Rose Mary Wentling, University of Illinois — *East 3*



Human Resource Development Quarterly

Editor

Ronald L. Jacobs

Ohio State University

Research Journal of the Academy of Human Resource Development

Now beginning its tenth year of publication, Human Resource Development Quarterly *(HRDQ)* has become the foremost research forum for interdisciplinary exchange on HRD.

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8:30 to 10:00

KEYNOTE PRESENTATION

South Ballroom

Standards on Ethics and Integrity for the Academy of Human Resource Development

Purpose: The purpose of this session is to introduce Academy members to a proposed set of Standards on Ethics and Integrity for the Academy of Human Resource Development. These Standards include sections on general principles, general standards, research and evaluation, advertising and other public statements, publication of work, privacy and confidentiality, teaching and facilitating, and resolution of ethical issues and violations. In addition to introducing these recently-developed Standards, the session will identify some ethical issues for members. It will include a panel presentation and allow for reactions from the audience. Thus, it provides a unique opportunity for Academy members to express their views on the Standards and to influence their future direction.

Structure and Process: This 90-minute session will be led by a panel of people who worked on the development of these Standards. During the first half hour, the panel members will provide details on the background of this effort, the process used for the development, an overview of the Standards, and one or two brief case studies using the Standards. During the second half hour of the session, a separate panel of selected Academy members will give their reactions to the Standards. During the final half hour of the session, members of the audience will be asked to discuss and react to the presentations. Since we want to encourage your participation, you may want to consider the following questions:

- In your work, what ethical issues have you faced?
- To what extent do these Standards address those issues?
- To what extent will such Standards help you in your work?

Panel Members:

★Janet Z. Burns, Georgia State University
★Peter Dean, University of Tennessee
★Timothy Hatcher, University of Louisville
★Fred L. Otte, Georgia State University
★Hallie Preskill, University of New Mexico
★Darlene Russ-Eft, AchieveGlobal, Inc.

Reaction Panel:

★Laurie Bassi, American Society of Training and Development
★Neal Chalofsky, George Washington University
★Elwood F. Holton, III, Louisiana State University
★Ronald L. Jacobs, Ohio State University
★Michael Leimbach, Wilson Learning Corporation
★Victoria J. Marsick, Columbia University
★Karen E. Watkins, University of Georgia

Please note: The full text of the ***Standards on Ethics and Integrity for the Academy of Human Resource Development*** is provided at the end of Volume 2 of the 1999 AHRD Conference Proceedings.

10:00 to 10:15

Refreshment Break

South Ballroom

10:15 - 11:45 AM - CONCURRENT SYMPOSIUM SESSIONS

17 **Facilitating Organizational Change** *Cavalier A*

Chair: Sharon J. Korth, Xavier University

17 - 1 Conflicts that Arise in Small Group Facilitation: A Descriptive Study of Accounts, Actions, Outcomes, and Assessments

Judith A. Kolb, Pennsylvania State University

William J. Rothwell, Pennsylvania State University

17 - 2 A Test of a Rapid Developer Model: Workplace Factors Associated with Learning and Development

James A. Alexander, AFSM International

17 - 3 Barriers to Transformation Change: High Performance Workplace Practices and Unionized Companies

Joseph A. Benkowski, University of Wisconsin-Stout

17 - 4 Pew Sitter or Church Pillar: A Case Study of a Non-Profit Organization's Need for A Director of Volunteer Development to Mobilize Its Volunteer Force

Patrice M. Scanlon, George Washington University

18 **Evaluation in Human Resource Development** *North 2*

Chair: Darlene Russ-Eft, AchieveGlobal, Inc.

18 - 1 Assessing Organizational Readiness for Learning through Evaluative Inquiry

Hallie Preskill, University of New Mexico

Rosalie T. Torres, Developmental Studies Center

18 - 2 Design and Development of an Evaluation System for Online Instruction

Tim L. Wentling, University of Illinois at Urbana/Champaign

Scott D. Johnson, University of Illinois at Urbana/Champaign

18 - 3 The Mixed-Method Evaluation in HRD--A Description of Methods Applied in the Industrial Development Program

Ville Nurmi, Finnish Institute of Occupational Health

18 - 4 The Effects of Two Training Systems on Trainee Satisfaction, Learning, Job Behavior, Retention and Organizational Performance

Maria Hruby-Moore, Ohio State University

19 **New Perspectives in Human Resource Development** *North 3*

Chair: Jean McFarland, G.P. Morgan and Associates, Inc.

19-1 Developing an Instrument to Measure the Use of Play-Based Training Methods in Healthcare Education

Rebecca J. Adams, University of Georgia

Karen E. Watkins, University of Georgia

Tom Valentine, University of Georgia

19-2 An Approach to HRD Based on Acceptance of Responsibility, Dedication to Truth, Delaying Gratification, and Love: A Case for Kenyan Students

Tabitha Sewe, Moi University, Kenya

19-3 HRD and Economic Development: A Mega Level Research Agenda

Suhail S. Zidan, Ohio State University

19-4 Improving Technical Training: The Effectiveness of Technical Subject Matter Experts as Trainers

Saundra Wall Williams, North Carolina State University

10:15 - 11:45 AM - CONCURRENT SYMPOSIUM SESSIONS

Journals Session

Academy Journals Symposium for Editors and Authors — *Cavalier B*

Chair: Gary N. McLean, University of Minnesota

Advances in Developing Human Resources

Richard A. Swanson, , University of Minnesota

Human Resource Development Quarterly

Ronald L. Jacobs, Ohio State University

Human Resource Development International

Devi Jankowicz, University of Teeside, United Kingdom

20

Integrating Learning and Performance — *North 1*

K. Peter Kuchinke, University of Illinois at Urbana/Champaign

20 - 1 Identifying the Skill Requirments and Performance Needs of Small Manufacturers

Julie A. Furst-Bowe, University of Wisconsin-Stout

20 - 2 The Relationship of Learning and Performance at Different System Levels

Richard J. Torraco, University of Nebraska

20 - 3 Historical Antecedents Shaping the Terms of Performance and Learning and their Relationship in Human Resource Development: An Exploratory Study

John A. Henschke, University of Missouri-St. Louis

20 - 4 Developing Managerial Competence: Does it Improve Performance?

Jonathan Winterton, Napier University, Edinburgh, United Kingdom

Ruth Winterton, Napier University, Edinburgh, United Kingdom

Innovative Session

Integrating New Technologies into a Human Resource Development Curriculum — *Cavalier C*

This session will provide an interactive forum for scholars and practitioners to discuss issues and concerns related to integrating new technology into HRD courses and using technology as a vehicle for delivering instruction. Issues for discussion will include the rationale for using technology, the benefits of using technology, the concerns, constraints, and limitations of using technology, recommendations for how to integrate technology into the HRD curriculum, and areas for additional research. This session is designed to generate a high level of participation and scholarly dialogue among panelists and participants.

Panelists:

Michael J. Davis, Manchester University, United Kingdom

Robert L. Dilworth, Virginia Commonwealth University

Larry M. Dooley, Texas A&M University

Diane B. Erhlich, Northeastern Illinois University

Tom Shindell, Northeastern Illinois University

Catherine M. Sleezer, Oklahoma State University

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12:00 - 1:30 PM - CONCURRENT SYMPOSIUM SESSIONS

12:00 to 1:30 — **Food 'n Thought Discussions** — *Concourse 1 and Concourse 2*

Pull up a chair to meet and dialogue with any one of these groups

Discussion Group: Cyril O. Houle Scholarship Funds For Emerging Scholars

Facilitator: *Karen Watkins, University of Georgia*

Book Review: Identity in Organizations, Building Theory Through Conversations: Foundations for Organizational Science

David Whetten and Paul Godfrey

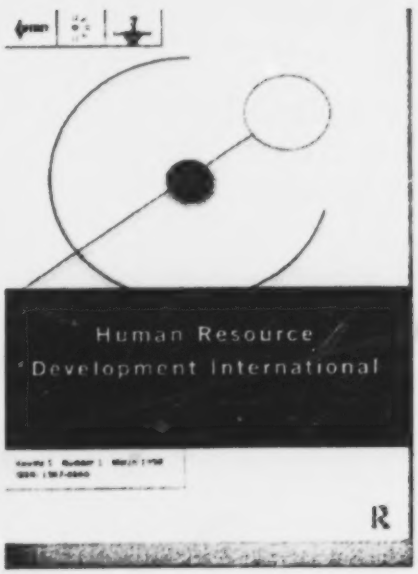
Facilitators: *Harriett Lawrence, Management by Communication*

Book Review: In Action: Improving Performance in Organizations

Editors: William Rothwell & David Dubois

Facilitators: *Jim Fedenia, Northern Illinois University*

12:00 to 1:30 — **ASTD Research Committee/AHRD Board Joint Meeting** — *East 3*



HUMAN RESOURCE DEVELOPMENT INTERNATIONAL

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12:00 - 1:30 PM - CONCURRENT SYMPOSIUM SESSIONS

21 **Individual Learning Issues** *Cavalier A*

Chair: Timothy G. Hatcher, University of Louisville

21 - 1 A Quantitative Examination of the Feelings and Cognitive Processes of a Group of Adults Undertaking a Tertiary HRD Program

Bryan W. Smith, Edith Cowan University, Australia

21 - 2 The Cycle of Awareness Development: A Cognitive and Psychosocial Theory of Adult Development

Martin B. Kormanik, George Washington University

21 - 3 Components of Effective Business Based Diversity Training Programs

Rose Mary Wentling, University of Illinois at Urbana/Champaign

Nilda Palma-Rivas, University of Illinois at Urbana/Champaign

21 - 4 Personality Traits, Affect, and Values: A Model of Dispositional Effects on Motivation to Learn

Elwood F. Holton III, Louisiana State University

Sharon S. Naquin, Louisiana State University

22 **Evaluating the Impact of Human Resource Development** *North 1*

Chair: Tim L. Wentling, University of Illinois at Urbana/Champaign

22-1 Pre-Job Training and the Earnings of High-tech Employees in Taiwan

Tung-Chun Huang, National Central University, Taiwan

22-2 Training Effectiveness and Employee Output - A Regression Model Based on Training Transfer and Organization Development Variables

Constantine Kontoghiorghes, Oakland University

22-3 Only Time Will Tell: Strengthening the Link Between HRD and Firm Performance

Laurie J. Bassi, American Society for Training and Development

Mark E. Van Buren, American Society for Training and Development

22-4 Contemporary Approaches to Return On Investment from Training

Paul E. Brauchle, Illinois State University

William H. Koenecke, Illinois State University

23 **Human Resource Development in the United Kingdom** *North 2*

Roger F. Miller, University of Nottingham, United Kingdom

23 - 1 HRD and Psychological Contracts: A Case of Lifelong Learning

Graeme Martin, University of Abertay, Scotland

Judy Pate, University of Abertay, Scotland

Jim McGoldrick, University of Abertay, Scotland

23 - 2 Comparing international HRD practices with cross-cultural theories and research: A case study of the Office for National Statistics

Dana Bourland, University of Minnesota

Darren S. Short, Office of National Statistics, United Kingdom

23 - 3 Management and Career Development in the UK in Practice

Paul Iles, Liverpool John Moores University

23 - 4 Information and Feedback Seeking in U. S. and British Human Resources Development and Training Settings

K. Peter Kuchinke, University of Illinois at Urbana/Champaign

Darren S. Short, Office of National Statistics, United Kingdom

12:00 - 1:30 PM - CONCURRENT SYMPOSIUM SESSIONS

24 **HRD Professional Development** *North 3*

Chair: Maria Cseh, Oakland University

24-1 Mentoring as a Tool for Faculty Development: Predicting Positive Outcomes for Mentors

Ellen J. Mullen, Iowa State University

John Van Ast, , Iowa State University

Harry Grant, , University of California at Irving

24-2 The Evolving Role of Trainers and the Consulting Component in Corporate Universities

Ghazala Ovaice, University of Illinois at Urbana/Champaign

Tim L. Wentling, University of Illinois at Urbana/Champaign

24-3 A Corporate-University Partnership for the Development of HRD Professionals: A Case Study

Marijke T. Kehrhahn, University of Connecticut

Rudolfo Vernilli, The Hartford Life Company

24-4 Employed Adults in the B.S. ED Hrd Program Option: Who Are These Students and Why Are They Here?

Hui-Chin Chu, University of Arkansas

Ana Martinez, University of Arkansas

Barbara E. Hinton, University of Arkansas

25 **Changing Workplace** *Cavalier B*

Chair: Toni Powell, Barry University

25 - 1 Women Entrepreneurs: Maintaining Business Success Through Human Resource Development

Dominic G. Kamau, University of Minnesota

Gary N. McLean, , University of Minnesota

Alexander Ardishvili, University of Minnesota

25 - 2 Evaluating the Impact of a Union-Management Career Development Program

Gregory M. Chajnacki, Harleysville Group, Inc.

Andrea D. Ellinger, Pennsylvania State University

25 - 3 The Superiority of Employee Owned Companies: Reality or Myth?

Robert B. Gudgel, Work in Northeast Ohio Council

Fred C. Feitler, Kent State University

Karen Thomas, Kent State University

25 - 4 Recruiting and Retaining Women in Business: Women Executives Maneuver to Change the Status Quo

Laura L. Bierema, Michigan State University

1:45 - 3:15 PM - CONCURRENT SYMPOSIUM SESSIONS

26 **Measurement and Research Tools** *North 3*

Chair: Reid A. Bates, Louisiana State University

26 - 1 Income Effects of Human Resource Development for Higher Educated Professionals

Martin Mulder, University of Twente, The Netherlands

Bob Witziers, , University of Twente, The Netherlands

26 - 2 Do Higher Performing Managers Actually Receive Better Ratings? A Validation Of Multirater Assessment Methodology

Allan H. Church, W. Warner Burke and Associates, Inc.

26 - 3 Examination of the Tendency of Coefficent Alpha to Support the Choice of Instruments with Response Category Restriction

Shani D. Carter, University of Scranton

26 - 4 A Factor Analytic Investigation of the Content of Participant Reactions: Affective and Utility Judgments

Ronald B. Morgan, George Washington University

Wendy Casper, George Mason University

27 **Workforce Development** *Cavalier B*

Chair: Baiyin Yang, University of Idaho

27-1 Effects of two different learning paths on school-to-work transition

Esther Van Der School, University of Twente, The Netherlands

27-2 Predictors of Success in Welfare-to-Work Training for the Information Technology Workforce

Albert K. Wiswell, Virginia Polytechnic Institute and State University

Margaret G. McCrudden, Virginia Polytechnic Institute and State University

27-3 Workforce Preparation in a Rural Context: A Curriculum Integration Intervention

Gene L. Roth, Northern Illinois University

27-4 Human Resource Related Characteristics in Selected Small Manufacturing Companies in Mexico

William R. Venable, Oklahoma State University

Innovative Session **Performance Analysis--Analyzing Analysis** *Cavalier C*

This session will examine performance analysis, what it is, and what it ought to be. A case study from Motorola will illustrate the cost of not analyzing performance prior to taking action. While analysis involves finding certain predictable kinds of information, different performance requirements influence the nature of the studies. Why should a study to launch a new operating system be the same as what must be done to enhance performance appraisals or determine the development needs of professionals for the 21st century? An automated approach to performance analysis will be introduced that matches requests for assistance with performance-based responses. In addition, strategies for expediting the process of performance analysis will be discussed. This session is designed to generate a high level of participation and scholarly dialogue about performance analysis among panelists and participants.

Panelists:

Marguerite Foxon, Motorola

Allison Rossett, San Diego State University

Richard J. Torraco, University of Nebraska

1:45 - 3:15 PM - CONCURRENT SYMPOSIUM SESSIONS

28 **Individual Differences in Learning** North 2

Chair: Dennis G.Tesolowski, Clemson University

28-1 Creek Women's Perceptions of Work: A Qualitative Study
Barbara Bussell Kawulich, Georgia State University
Carol D. Hansen, Georgia State University

28-2 The Effect of Perceptual Learning Style and Self-efficacy on Preferred Instructional Methods in an Advanced Technical Program: A Comparison of Computer Based Training and Lecture
Daniel L. Parry, University of Louisville

28-3 Subordinates' Information Seeking Behavior: Empirical Investigation of the Effect of Perceived Leadership Style and Individual Differences
Svjetlana Madzar, Gustavus Adolphus College

28-4 An Empirical Study of Age Discrimination in Teacher Selection with Application to HRD
Jeffry S. Bowman, Ohio State University
Kiyoe Harada, Ohio State University

29 **Linking HRD Practice and Research** North 1

Chair: C. Ken Weidner, II, Loyola University Chicago

29 - 1 Partnership Research: Ensuring More Useful HRD Collaborations
Ronald L. Jacobs, Ohio State University

29 - 2 A Discussion of the Methodological Appropriateness of Research Represented in the AHRD Proceedings--A Strategic Perspective for Journey Management
Christopher R. Hardy, Innolog, Inc.

29 - 3 Theory in "Theory to Practice": Voices of Practitioners
Wendy E.A. Ruona, University of Minnesota

29 - 4 The Status of HRD Research Literature in 1997
Judy A. Hixon, Oklahoma State University
Timothy R. McClemon, People Architects, Inc.

Academy Discussion **A Continuing Discussion on Globalizing the Academy of Human Resource Development** Cavalier A

Facilitators: Victoria J. Marsick and Martha A. Gephart, Columbia University

The Academy invites members to join this discussion who have international global experience and are willing to participate in a multi-country, exploratory research process in the coming year around the meaning and processes of globalizing the Academy. Bring your ideas about the nature and focus for a research project of this kind. This interactive discussion will lead to a framework and action plan for the coming year."

3:15 to 3:30 **Refreshment Break** *South Ballroom*

3:30 - 5:00 PM - CONCURRENT SYMPOSIUM SESSIONS

30 **Contextual Learning Issues** *North 3*

Chair: Robert W. Rowden, Mercer University

30 - 1 Learning to Learn Strategies of Successful Real Estate Professionals: Implications for Learning in the Workplace

Margot Weinstein, Kingston Group, Inc.

30 - 2 Vital Work: Spirit and Development Within the Natural Workplace

Terri A. Deems, Worklife Design

30 - 3 Action Learning as a Strategy for Inducing Psychological, Cultural and Organizational Boundarylessness

Verna J. Willis, Georgia State University

Robert L. Dilworth, Virginia Commonwealth University

30 - 4 Contextual Learning of Owner-Managers of Small, Successful Romanian Companies

Maria Cseh, Oakland University

31 **Career Issues in HRD** *Cavalier B*

Chair: Larry M. Dooley, Texas A&M University

31-1 Are Careers What they Used to be: A Factor Analysis of Schein's Career Orientations Inventory

Gerri Murki, US Naval School of Health Science

Sharon J. Confessore, George Washington University

31-2 Women's Professional Organizations: Their Potential Role in Women's Careers

Shelia Barry-Oliver, George Washington University

Sharon J. Confessore, George Washington University

31-3 Non-profits and Women CEOs' Careers

Jenny Harrow, South Bank University, United Kingdom

Veronica Mole, South Bank University , United Kingdom

31-4 Career Development of Expatriate Managers: An International HRD Issue for Singapore-Based Companies

AAhad M. Osman-Gani, Nanyang Technological University, Singapore

Gerald Z. D. Huang, Nanyang Technological University, Singapore

32 **Assessing Employee Performance** *North 1*

Chair: Paul Brauchle, Illinois State University

32-1 Influence of Liking and Similarity on Multi-rater Proficiency Ratings of Managerial Competencies

Reid A. Bates, Louisiana State University

32-2 A Cross-Case Study: Revisiting Implementations of the Performance Analysis for Training (PAT) Model

Catherine M. Sleezer, Oklahoma State University

Dale E. Kunneman, Meridian Technology Center

32-3 Large-Scale Training Needs Assessment of State Government Office Support Workers: A Case Study

Donna H. Redmann, Louisiana State University

32-4 Results Assessment System: From Evaluation to Assessment

Richard A. Swanson, University of Minnesota

Elwood F. Holton III, Louisiana State University

3:30 - 5:00 PM - CONCURRENT SYMPOSIUM SESSIONS

33 **Core Directions in Human Resource Development** *North 2*

Chair: Ronald L. Jacobs, Ohio State University

33-1 Examination of Critical Issues for Development and Implementation of Online Instruction

Scott D. Johnson, University of Illinois at Urbana/Champaign

Nilda Palma-Rivas, University of Illinois at Urbana/Champaign

Chanidprapa Suriya, University of Illinois at Urbana/Champaign

Steve Downey, University of Illinois at Urbana/Champaign

33-2 The Relationship of Psychological Preferences and the Human Resource Development Role of Instructor/Facilitator: A Qualitative Analysis

Rafael Martinez, Barry University

Douglas H. Smith, Florida International University

33-3 HRD Competencies and Roles for 2000: A Study of the Perceptions of HRD Practitioners

Toni Powell, Barry University

Betty Hubschman, Barry University

33-4 Ethical Aspects of Human Resource Development

Jean Woodall, Kingston University, United Kingdom

Danielle Douglas, Phoenix Human Resources Consultants, United Kingdom

34 **Cultural Issues in Organizations** *Cavalier A*

Chair: Marie A. George, University of Scranton

34 - 1 Emotion Management and Organizational Functions: a Study of Action in a Not-for-profit Organization

Jamie Callahan Fabian, Virginia Polytechnic Institute and State University

34 - 2 Communities in the Workplace

Darlene Russ-Eft, AchieveGlobal, Inc.

34 - 3 Show Me the Money: Moderators of Satisfaction for University Administrators

Janine Waclawski, W. Warner Burke and Associates, Inc.

Allan H. Church, W. Warner Burke and Associates, Inc.

34 - 4 Questioning the Viability of a Women's Network as a Management Development Activity

Linda M. Hite, Indiana University - Purdue University

Kimberly S. McDonald, Indiana University - Purdue University

6:00 ***PRESIDENT'S RECEPTION*** *North Ballroom*

All registered attendees invited

7:00 ***PRESIDENT'S DINNER*** *South Ballroom*

All registered attendees invited - Don't miss this enjoyable evening of celebration and fellowship

Academy Awards

Election Results

Presidential Address

Sunday, March 7

7:00am to 2:00pm **CONFERENCE CENTRAL, REGISTRATION, AND EXHIBITS OPEN** — *Foyer*

Food 'n Thought Discussions Pull up a chair to meet and dialogue with any one of these groups. — *Concourse 1 and Concourse 2*

7:00 to 8:15

Discussion Group: Connecting with Publishers

A representative from the American Society for Training and Development and Berrett-Koehler Publishers will meet with you to discuss how to work with a publisher.

Book Review: ***Performance Based Training: Linking Training to Business Results,***

Dale Brethower and Karolyn Smalley

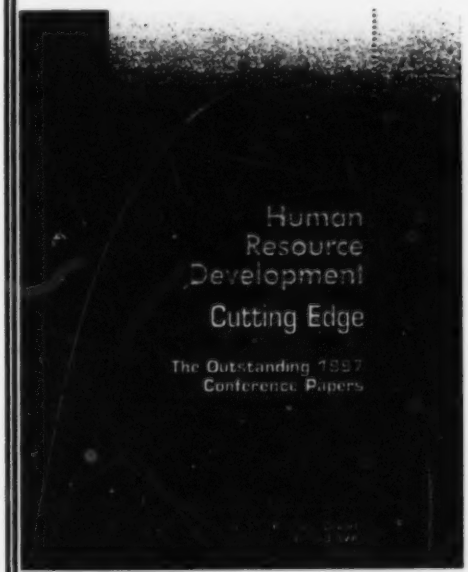
Facilitators: *Annette Cremo, Cremo, Stallworth and Associates*

Book Review: ***Results: Leading Organizations: Perspectives for a New Era***

Gill Robinson Hickman

Facilitators: *Marijke T. Kehrhahn, University of Connecticut*

7:00 to 8:15 **AHRD Board of Directors Meeting (new board)** — *East 3*



DEFINING THE CUTTING EDGE

Based on the 10 best papers from the 1998 AHRD conference

Wim J. Nijhof
University of Twente
The Netherlands
Editor

Published by AHRD

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8:30 - 10:00 AM - CONCURRENT SYMPOSIUM SESSIONS

35 **Workplace Learning Issues** *North 2*

Chair: Svjetlana Madzar, Gustavus Adolphus College

35 - 1 The Changing Role of Training Consultants in Organizing Work-related Learning

Rob F. Poell, University of Nijmegen, The Netherlands

Geoff E. Chivers, University of Sheffield, United Kingdom

35 - 2 Using Study Circles in the Workplace as an Educational Method of Facilitating Readjustment After a Traumatic Life Experience

Barbara Barski-Carrow, US Deparment of Health and Human Services

35 - 3 Learning Activities of Junior Managers: Findings of a Quantitative Pilot Study

Eline S. K. Lankhuijzen, UtrechtUniversity, The Netherlands

35 - 4 Integrating Learning with Working--A Reconception of the Role of Workplace Learning

Richard J. Torraco, University of Nebraska

36 **Transfer of Learning** *North 1*

Chair: Jamie Callahan Fabian, Virginia Polytechnic Institute and State University

36-1 Learning Transfer in a Social Service Agency: Test of an Expectancy Model of Motivation

Reid A. Bates, Louisiana State University

Elwood F. Holton III, Louisiana State University

36-2 The Relationship Between Learner Utility Reactions and Predictors of Learning Transfer: Implication for Evaluation

Wendy E.A. Ruona, University of Minnesota

Michael Leimbach, Wilson Learning Corporation

Elwood F. Holton III, Louisiana State University

Reid A. Bates, Louisiana State University

36-3 Mixed Methods: The Value of the Qualitative Perspective in Transfer of Training Research

Gary L. May, Millbrook Distribution Services

36-4 Theories Supporting Transfer of Training

Siripom Yamnill, University of Minnesota

Gary N. McLean, University of Minnesota

37 **Change Processes in Organization** *North 3*

Chair: Hallie M. Preskill, University of New Mexico

37-1 The Role of the Survey in the Assessment of an Organization for High Performance Redesign: A Case Study

Teresa K Moyers, Hollister, Inc.

Oris T. Griffin, James Madison University

37-2 Thriving on Change: An Organizational Identity Model

Sheila L. Margolis, Georgia State University

37-3 Organizational Change and Transformation: A Multi-Faith Perspective

Dorothy A. Marcic, Vanderbilt University

Susanne M. Fest, Vanderbilt University

37-4 A Nine-Month Follow-up Assessment of a Large Scale Interactive Event Designed to Implement Organizational Change in a State Government Organization

Dominic G. Kamau, University of Minnesota

Gary N. McLean, University of Minnesota

8:30 - 10:00 AM - CONCURRENT SYMPOSIUM SESSIONS

Research Forum

Research Forum of Emerging Issues — *Cavalier C*

Chair: Andrea D. Ellinger, Pennsylvania State University

Business and Higher Education Collaborate to Design A Human Resource Management Program

Gloria Holland, Towson State University

Reflective Human Resource Development Practitioners: Integrating Research and Practice into a Graduate Adult Education Curriculum

Vivian W. Mott, East Carolina University

Framing: Four Windows on Organizational Worlds

Timothy G. Hatcher, University of Louisville

Impact of Cultural Characteristics on Organizational Performance

Doug Bryant, George Washington University

Carolyn Palmer, George Washington University

Tim Tobin, George Washington University

38

Qualitative Studies in HRD — *Cavalier B*

Chair: Verna J. Willis, Georgia State University

38-1 What It Is Like To Be An Independent HRD Consultant?

Alexander Ardishvili, University of Minnesota

38-2 Virtual Learning Communities: Creating Meaning through Dialogue and Inquiry in Cyberspace

Judy Milton, University of Georgia

Mike Davis, Manchester University, England

Karen E. Watkins, University of Georgia

38-3 Conducting Multilingual Qualitative Research in Human Resource Development: Implications for Validity and Reliability

Maria Cseh, Oakland University

38-4 An Ethnographic Study of Cross-Cultural Impacts on Tutoring in an Organization

Lori A. Petersen, University of Minnesota

39 **Interpersonal Dynamics in the Workplace** *Cavalier A*

Chair: Terri A. Deems, Worklife Design

39-1 Trust and Distrust at Work: Normative and Dyad-exchange Influences on Performance

C. Ken Weidner, II, Loyola University Chicago

39-2 Work Culture Adjustment: A Critical Ingredient to Organizational Change

David J. Pucel, University of Minnesota

39-3 The Moderating Effects of Individualism and Collectivism on HRD as an Instrument of Modernity

Carol D. Hansen, Georgia State University

39-4 HRD Faculty and Leaders: The Application of the Full Range Leadership Theory to Graduate Level HRD Instruction

Fred Walumbwa, University of Illinois at Urbana/Champaign

K. Peter Kuchinke, University of Illinois at Urbana/Champaign

10:00 to 10:30 **Refreshment Break** *South* Ballroom

10:30 to 12:00

KEYNOTE PRESENTATION

South Ballroom

HRD and The Business: Turbulence, Turmoil and Strategic Direction

Rosemary Harrison, Durham University, United Kingdom

In its search for academic and professional identity, HRD still struggles for gravitas. Its business credentials are questioned when in many organizations the function is re-engineered, downsized, often outsourced. Its bottom-line contribution remains ambivalent, its strategic role uncertain. Yet in a world of increasing turbulence, HRD must overcome its own turmoil and strive for a powerful impact on organizational capabilities that are essential for business survival.

Despite the years of academic debate, however, those capabilities lack clear definition and an integrative conceptual base. Rosemary Harrison will introduce a new model of HRD in the business, with a framework that draws on her long experience in the field, on international case studies, and on her wide-ranging knowledge of the relevant literatures. Her work offers no panaceas for the turmoil of HRD, but seeks rather to open routes through some of HRD's more disputed organizational territory.

Rosemary Harrison is a leading HRD academic, professional, and author of many articles and best-selling texts (including *People and Organizations: Employee Development*, 1997) with international readership. She was Director of Durham University's (UK) HRD Research Center until retirement in 1996, and continues to conduct her research program there. She began her academic career at a leading UK polytechnic where she lectured in personnel management and organizational behavior. She taught extensively on postgraduate management and personnel programs, pioneering competency-based management education programs that achieved national recognition. In 1989 she joined the business school of one of Britain's ancient universities, Durham. There, she launched the School's first part-time MBA program, and directed an innovative Clinical Directors' management development program that won government funding and provided data for prize-winning academic papers. She has worked as consultant for many private and public-sector organizations and her public positions have included governor of a girls' independent school, non-executive director of a major NHS Trust, and specialist adviser for the British Council for National Academic Awards. In 1996 she was invited to become the Institute of Personnel and Development's Chief Examiner in Employee Development. The IPD is probably Europe's largest professional body, with membership nearing 100,000, and in that year had introduced national professional Standards to underpin its new qualification structure. In 1997 Harrison spearheaded the development of Standards in *Transition and Transformation of Organizations*, covering a field with which her address will be centrally concerned.

Moderator: K. Peter Kuchinke, University of Illinois at Urbana/Champaign

12:00 to 1:00

North 1

AHRD Business Meeting - All Academy Members

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Certification of HRD Professionals, Products, and Academic Programs-The Role of AHRD

Michael Leimbach
Wilson Learning Corporation

As our profession grows, both in size and importance to organizational performance, we inevitably are confronted with the issue of industry-wide standards, and how to hold organizations and people accountable to those standards. Should the Academy of HRD be involved in establishing standards and certification in HRD? If so, how should the Academy be involved? The purpose of this paper is to help facilitate a dialogue on the role of AHRD in Certification. A description of certification is presented which suggests that there are several stages of certification. I then present arguments for why AHRD should be cautions, especially at the stages of certification that involve product evaluation and endorsement.

US organizations budgeted more that $58 billion for training in 1997 an expenditure that continues to rise, increasing 5 percent over the 1996 figure (Training, October 1997). Of this, over $13 billion was spent on purchased programs and services while approximately $22 billion was spent on employing HRD professional within their organizations. Organizations make this expenditure because they are aware of the importance of developing the talents and capabilities of their employees. Employees working together within an organization provide an important source of competitive advantage (Wimbiscus, 1995), some say the only source of competitive advantage (D'Aveni, 1994; Ehlen, 1995). In addition, because HRD is a growing industry an increasing number of students are choosing to enter the HRD profession, and choosing programs of higher learning to acquire the skills organizations need.

It is clear that some kind of information, or certification of quality could have a tremendous impact on our industry and profession. If certification of training programs, for example, could result in a small incremental improvement in the quality of purchases, corporations could save millions (e.g. a 2% improvement in purchasing decision making would translate into $20 Million). If information about programs could help students make better matches between their needs and the offering of an academic program, our profession would grow that much faster. And as new roles within HRD come into existence, information about the qualifications of potential employees will help organizations make better comparisons between the human resources and the activities and responsibilities across professionals.

Despite this need there is a dearth of third party information about quality within our industry. Organizations are provided with little unbiased information on the quality of the products they purchase (Passmore, Sleezer, Wise, and Passmore, 1993). Students rely on information distributed by the academic programs, or general rating of college-wide comparative quality. As our profession becomes increasingly important to sustained organizational growth and strategy implementation, the need for this information becomes more acutely felt. I believe that there is wide agreement that certification of professionals, products, and academic programs could be useful to the growth of our discipline and industry. Nor is it a question of whether AHRD has a role to play in assuring quality of human resource development professionals, programs, and products. I believe that the reason most of use are members or attend the conference is because we believe that AHRD is advancing our field. The question is not whether the Academy should be involved in certification. No other professional body is better prepared to address this issue. Rather, the central question is what is the most appropriate role for AHRD in the certification process.

The purpose of this paper is not to resolve this issue, but to describe why I believe that the Academy should move cautiously toward the issue of certification. I will begin with a description of certification, including a definition of the components and a description of some of the options for certification. I will then present some key reasons why AHRD should not, at this time, be directly involved in full certification. It would be a mistake for the Academy to take on certification at this time. While the intent of this discussion is to cover certification of professionals, products and academic program, trying to address all three at onces could be confusing. Therefore, I have framed most of my discussion on the topic most salient today, certification of HRD products. Human Resource Development is saturated with products. Some products are high quality and some are quick-fix, flavor-of-the-month, buzz-worded remnants of a slick sales job. These later products not only don't work, but also absorb HRD budgets and deplete the credibility of those delivering them. Without some form of certification the quality and utility of these products can only be determined after they are purchased and delivered. At this point, it is too late.

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While my arguments are directed toward products, I believe they also apply to the other two domains – HRD professionals and academic programs.

What is Certification

To begin, we need to address the question, what is certification? The American Heritage Dictionary defines certification as the act of "confirming formally as true, accurate, or genuine. To guarantee as meeting a standard." In practice, however, individuals and organizations apply this term to a large number of activities and outputs. While there is no agreed upon use of the term "certification" most applications share one or more of the following elements: standards, data sharing, and endorsement. While not necessarily steps in a certification process, it can be useful to discuss certification as a three-step process leading to full certification/endorcement.

Defining Standards

The first step in development of any type of certification is the definition of the standards of certification. For HRD this is an important step as many current scholars agree that performance standards in our industry are poorly defined or non-existent (Holton, 1998) and the search for readily reportable measures of quality has been fraught with troubles (Edgman-Levitan, 1998). As a first step in certification, standards are a descriptive component, not evaluative. The purpose of setting standards is to define a set of characteristics, activities, or outcomes that individuals can use to compare and contrast different products. The standard is a descriptive statement of a desired state, not an evaluation of a specific instance and whether or not it meets the standard. Standards serve to describe the parameters of quality, not measure quality. Standards of quality can take many forms but are principally grouped into three types: technical, process, and utility/impact.

Some standards address technical characteristics. For example Underwriters Laboratories (UL) has standards for the design of electrical circuitry and grounding of home appliances. The US federal government has standards for radio and TV broadcasts. Technical standards address concrete, tangible characteristics of products. Within HRD there are some technical elements we can create standards for, but most are not very useful in describing the quality of products. For example, we could set standards on the presence of learning objectives in the materials, the types of learning activities, etc. However, because the vast majority of products meet these specifications, these standards would not help in differentiating products.

Process standards are standards focused on how a product is made. A good example of process standards are the standards behind ISO certification (ISO, 1991). ISO standards do not directly characterize the technical specifications of a product but defines quality standards for the processes used to develop and manufacture the product. Similarly HRD products are often evaluated relative to the extent to which they meet instructional design and development process.

Standards can also address utility or impact. If technical standards are equivalent to Demmings concept of "Conformance to specifications," utility standards might best be compared to Jurans "Fitness for use." The essence of utility standards is specification of the outcomes intended by the product. For example, one standard for HRD products could be that the product developer not make claims that can not be substantiated by factual documentation. Or, a standard that utility or impact of a product be substantiated by a study using accepted research methodology.

Standards are an essential first step, but alone they also can guide and advance the industry. For example, standards for TV broadcasting insure that all TVs can receive every broadcast signal. The value of a standard is largely determined by the credibility of the organization setting the standard and the voluntarily compliance of the industry to apply the standard.

Data Sharing

In our industry today, most unbiased information is provided through what Willenborg (1985) refers to as personal product knowledge. A buyer of a product bases choices on personal experience or inspection, or gathers opinions from colleagues. Similar processes are followed for students selecting an academic program. A more formalized form of data sharing occurs when an organization takes responsibility for collecting data, formatting it in a way that allows users to make comparisons, and distributes that data. Formalized data sharing assumes that some set of standards have been defined. While absolute standards are not required (e.g. "A two-ton truck should have a minimum of a 450 horsepower engine) there at least need to be clear categories of standards defined (e.g. all descriptions of two-ton trucks include horsepower ratings).

Data sharing can cover any and all of the standard types (technical, process, and utility). In addition, data sharing can also include information on consumer reactions to the product. Organizing and sharing data is, of course, a first step in certifying the quality of a product. However, it can stop short of actually certifying or endorsing a product. Probably one of the best current examples are the reader comments presented on amazon.com. Amazon.com, through their web sit, allows visitors to submit comments about books they have read. The reader also has the option of providing a rating (1 to 5 stars) of overall quality. Amazon.com does not filter or select these comments both good and bad reviews make it to the database. The site visitor is also aware of the limitations; comments represent personal opinions, the reviewer may have a personal bias or interest, and there is seldom enough data to make the ratings a reliable indicator of quality.

There is clearly a role for some organization to provide third party, or neutral, information on HRD products. While more involved than defining a set of standards, the Academy could get involved in communicating information on products as a neutral third party. This would not have to include evaluation, just reporting of information. Again, that reporting can take many forms. The academy can document technical characteristics, base upon technical standards described above. Information can also be provided on the documentation of utility or impact claims. For example, if an organization promotes a sales training program as "increasing sales" the Academy could provide information on whether or not the organization actually does have documentation that sales increased as a result of training. This falls short of certifying to the quality of that documentation (i.e. appropriately designed research, sufficient sample, statistically significant results, etc) just a reporting of the substantiation of the claim.

Alternatively, the Academy could serve as a "clearing house for consumer based information. Numerous list-serves do this now informally (we have all seen messages that being; "Has anyone used XYZ program and have on opinion on it?). A process could be designed similar to Amazon.com's consumer ratings/comments, using our web-site to collect and disseminate the information.

Endorsement

The final element is actual endorsement of quality. For many people the act of certification is synonymous with endorsement and it clearly closest to the dictionary definition. As a result of certification, certain products are given a "stamp of approval," and certain products are not. It is also a statement of warranty. A product certified by UL is a warranty that the product, under normal use, will not electrocute the user. Again, as in standards and providing information, different types of quality can be certified.

Technical quality can be certified. This is essentially what UL does, it examines products to assure that they meet appropriate standards for circuit design, grounding, and other specifications that warrant the safety of the product. It is important to note that UL, like most certifications, is narrow. UL does not certify that the toaster will make good toast, just that the toaster won't kill you. Within HRD the Academy could take on a certification to a set of technical standards. For example, do the programs contain appropriate instructional objects and do the activities follow adult instructional design parameters that will appropriately lead to those objectives.

Process quality can be certified. This is essentially the type of certification that ISO 9000 provides. ISO certification is not certification of the final quality of the product, but certifying that the organization engages in activities that will likely produce quality products. An analogy within HRD might be to certify the design and development and evaluation processes related to products. For example, can the vendor provide documentation that appropriate design analyses were performed, that learning objectives were appropriately developed, and that outcome claims were appropriately researched?

A third type of certification is outcome testing. Comparative product testing has been performed for decades. From whose french fries are the best to which laundry detergent gets clothes the brightest, the objective comparisons continue. Perhaps the most widely recognized example of this is Consumer Reports magazine. While much of what Consumer Reports provides might be best classified as data sharing, they also provide a direct comparison of product quality and make recommendations as to which products have the highest quality or are "best buys." Applied to HRD, an organization could take on the responsibility of doing direct product testing, or evaluate the tests done by others, and make recommendations, or certify to the utility of the product.

A fourth type of certification is customer satisfaction comparisons. Choosing this approach would make AHRD the J. D. Powers of the training and development industry. This goes beyond mere sharing of customer data (such as amazon.com) but implies a carefully controlled survey of customers that allow product to product comparisons. For example J. D. Powers uses sophisticated sample selection and analysis process that allow them to say that buyers of Mercedes and more satisfied than buyers of Lincolns (Reichheld, 1996). Thus, while not a direct measure or testing of product quality, different products can be compared via an unbiased sampling of users.

Problems with Certification

As stated earlier, I believe that there is strong support among Academy members for development of common standards. I also believe that AHRD should play a central role in this effort. I would also suggest that that the Academy might play a central role in providing unbiased information (sharing information) on adherence to quality standards. However, the question of certifying/endorcing products in our industry is fraught with dangers. Should the membership of the Academy not just communicate a set of standards in these three areas, but take responsibility for monitoring the degree to which these standards are met, and placing our "stamp of approval" on them? I believe there are several fundamental arguments why we should approach this effort with extreme caution. In this paper I will focus on the following:

- Talk of certification is pre-mature
- The important characteristics are largely qualitative in nature.
- The responsibility and liability is too high.
- Being the arbiter of certification is inconsistent with our mission of inclusion
- The certification process could consume the Academy
- Certification reinforces a static product orientation in the industry

Talk of Certification is Pre-mature

Certification comes after debate and the formation of consensus on a set of standards. Right now, there are no universally accepted standards for products in HRD. While I support an effort to define standards for HRD products, and believe that there might be a role for AHRD in sharing information about products, we are a long way away from being ready to commit to certification. We need to define these standards before moving on to certification. This also applies to standards for HRD professional and academic programs. While we have some standards in our industry, for example McLagan's Models for Excellence (1989) for training and development, none are specific to our industry as a whole.

Important Characteristics are Largely Qualitative

The important characteristics of products that will provide guidance to users are still largely qualitative in nature. Elements, such as the impact of a program on organizational or individual performance, are either qualitative, or where there are concrete measures, there is a subjective judgment as to the quality of the process used to collect those measures.

For example, take a sales training program. The concrete elements are things like length, presence of learning objectives, number of exercises, case studies, lectures, etc. While these are subject to little interpretation, they are also not very useful to a potential buying decision. So, we go deeper. The distributors of the program claim that the product "will improve the performance of a sales organization." How do we certify that claim? They don't say significantly improve or say "by 10%" so can we apply statistical criteria? Let's say they provide evidence in the form of a case study, showing that the sales organization did increase sales. What criteria do we use to say whether that is adequate or inadequate evidence of improvement? What if they presented 2 cases studies, or 5 or 10? What if they presented 10 cases studies, and showed the analysis that these 10 cases demonstrated statistical significance for sales improvement pre and post sales training? What if all 10 cases were computer companies and there were no controls for the rapid rise in computer equipment sales?

Ultimately it comes down to a judgment as to when the research evidence is sufficient to justify certifying a claim. Add to that the question of what we are certifying. Are certifying that the content of the program is supported by research (what do you do with NLP)? Are we certifying the instructional design? Or do we focus only on the result claims? We could chose to certify technical or process elements of products, but if we choose to certify to these, we will need to bridge that gap between certification and performance. What value is certification if the user does not believe there to be a connection between certification and performance? For example, is it widely accepted among practitioners that products with well-written instructional objectives are better than products lacking instructional objectives?

The Responsibility and Liability is Too High

Certification carries with it certain responsibilities and legal liabilities. How will vendors react to one of their products not being certified? Is the Academy ready to defend the process in court? Is there sufficient case law that will allow us to defend our certification process? These are all questions that need to be answered before we begin to certify products. Beyond the legal liabilities, what are the potential liabilities? Is there a conflict of interest, perceived or actual, within the Academy? Will member organizations be perceived to have an advantage in the certification process? Will academic programs whose faculty and students are members be perceived to have an advantage?

Certification is Inconsistent with Our Mission of Inclusion

We are an inclusive organization. What I value most in AHRD is the diversity of ideas and approaches. The process of certification is by definition exclusionary. One of the strengths of the Academy as an organization is the broad acceptance of approaches, research methodologies, disciplines and perspectives. Certification is one step toward an environment of exclusion. For example, if we choose as part of our certification process the requirement that claims of product impact use research methods consistent with the scientific method, will that ultimately lead professionals in our discipline who favor a phenomenological, case study, or qualitative methodology to leave the Academy. If we choose to accept more qualitative methods as evidence of impact, are we marginalizing the values of those who accept comparative scientific methods as the only true way to test hypotheses?

Certification Could Consume the Academy

Conducting certification will be a very big job. Does AHRD what to build the infrastructure to do this and will it consume the time and efforts of our governing board, to the detriment of other activities? Even if we just limit certification to products, and just to the US, there are still an overwhelming number of objects to certify. Add to that the fact that most products have numerous applications. The number of products and applications of those products is so vast, providing a fair and consistent certification may not be feasible for the Academy. Also, it will be difficult to determine conformity of two products to a common test. Rarely are two products so similar in purpose and intent that they permit easy/fair comparison.

Reinforcing a Static Product Orientation

Certification will need to define a unit of analysis. The one discussed most widely has been the product (a seminar, CD-ROM, guide, etc.). This is probably a necessary limitation of certification — it is difficult to certify multi-component systems. However, we as an industry are rapidly moving toward a systems perspective on HRD (Rummler & Brache, 1995). We treat as a given that the key to enhancing the effectiveness of learning is to see it as a process, with multiple components supporting learning application and transfer to the work environment. Using the example described above, we can certify the quality or impact of the sales training program. But doesn't certification of the program miss the point when a multi-dimensional effort that includes aligned compensation, application tools, incentives, management support (and yes, training), is much more consistent with our view of performance improvement? While a product is a feasible object of certification, the process – which resists precise description and certification – deserves our endorsement. If we certify programs, will we reinforce an orientation we know to be false? Will we "freeze" our vision of the industry to a standard that we know is limiting the impact of HRD today?

Is Certification Consistent with the Mission of AHRD?

It is my perspective, for the reasons cited about, that AHRD should not become involved in certification (i.e. endorsements) of HRD products. While the Academy should consider developing and disseminating standards for products, and creating a process to help buyers of products apply these standards in their selection of products; the Academy should not enter this arena as a certifying agency. Rather, I believe that the Academy must, first and foremost, uphold its mission to "lead the profession through research." We can honor this mission without taking on the burdens of liability, infrastructure, and uncertainty that certification entails.

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Human Resource Development Certification: A Strategy for Leading the HRD Profession through Research

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This paper presents a strategy to enact the Academy of Human Resource Development vision by developing and implementing certification. It identifies the critical needs for such certification and then examines how certification and consumer-report information from other fields can be applied to human resource development. The paper argues that currently individuals, organizations, and the profession pay high costs for substandard products, and that it is time to stop paying.

The vision for the Academy of Human Resource Development (AHRD) is to lead the human resource development (HRD) profession through research. In this paper, we present a strategy to enact the vision by developing and implementing certification for HRD products and programs. We answer two questions: "Why certify?" and "Is HRD certification feasible?" This article begins by outlining the critical need for HRD certification. We argue that certifying HRD products (e.g., conferences, workshops, customized interventions, and training materials) and HRD programs (e.g., academic and certification efforts) can provide some assurance that they do what they say they will do, and that they reflect accepted HRD theory and practice. Further, certifying HRD programs can assure that the professionals in our field have the skills and the knowledge of HRD theory and practice that they need to effectively perform their work. Because both HRD products and programs are considered by consumers to be HRD products that have costs and expected values, we use the term products in this paper to encompass both terms. After outlining the critical need, we examine the certification and consumer report information presented in the literature and describe its application to the HRD certification. We conclude by showing how HRD certification can benefit individuals, organizations, and the HRD profession.

Critical Need for HRD Certification

When employees working together within an organization produce rare or unique processes that are difficult for others to copy, they provide a source of sustainable competitive advantage (Barney, 1991). So, it is not surprising that organizational decision makers are investing increasingly in HRD interventions that purport to optimize the performance of individuals, teams, and the entire organization. Examples of such efforts include training employees, organizing high performance work teams and systems, implementing total quality management, and facilitating employee empowerment.

The investment in HRD products is staggering. U.S. organizations with 100 or more employees budgeted over $58.6 billion for training in 1997, a 5 percent increase over 1996 (Training, October, 1997). Outside expenditures comprised of seminars and conferences, hardware, off-the-shelf materials, outside services, and custom materials accounted for $13.6 billion, 23% of the total training budget. The 1999 American Society for Training and Development (ASTD) State of the Industry Report noted increases in many categories in 1998 including training expenditures, proportions of people trained, and use of external training providers (Bassi & Van Buren, 1999). The increased investment in HRD has led, in turn, to increased expectations for HRD accountability (Brinkerhoff, 1987; Swanson, 1994).

The increased investment in HRD and the corresponding increase in accountability highlight a problem: there is great variation in the effectiveness of HRD efforts. It has been estimated that 50% of HRD efforts are ineffective. Decision-makers who wish to purchase the most effective, least costly, research-based HRD products and services

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for their situation face a daunting task. To be successful, the decision makers must first access literature that is written in research-based jargon. The decision makers must also have the requisite time and expertise to review and synthesize the wealth of information available on the topic of interest (Bassi, 1998). So, it is not surprising that decision makers often fail to consult scholars (Bassi, 1998) and, instead, rely on vendor materials from mailings and conferences in making their purchasing decisions.

Basing HRD purchasing decisions on the endorsements contained in vendor brochures and catalogues or touted by vendors at professional conferences is problematic for several reasons. First, the proliferation of HRD products in the marketplace and the different names used for virtually identical offerings makes wading through all the options to comparison shop virtually impossible. Second, vendor materials may be biased, inaccurate, or misleading. Some HRD products offer high quality solutions, and others offer quick fix, faddish solutions. While the marketing materials for both types of products may look similar, the latter products are not integrated with the economic realities of the business, the current systems, or the psychological needs of the individuals within the organization (Evarts, 1998). The quick fix, faddish products often fail to make a lasting positive impact on organization performance. Such failures not only absorb organization resources, but also may leave organizations in a diminished competitive position (Sleezer, Zhang, Maile, & Gradous, in press). Third, vendors who obtain market and financial success with products have little motivation for seeking new research and product improvements, especially when if they can increase sales by doing more marketing. The predicament for decision makers is that the quality and utility of HRD products often cannot be determined until after they have been purchased and used and have produced a positive or negative impact on individuals, teams, and the organization.

In other arenas, well-educated consumers have found refuge in certification and consumer reporting processes that inform, educate, and protect the consumer. In arguing that the AHRD should develop and implement HRD certification, we should recognize that an organization with a vision of leading the HRD profession through research has an important role to play in informing, educating, and protecting HRD consumers. Such a role would assure that HRD professionals have the necessary knowledge, skills, and abilities to do their work and that HRD products and programs do what they say they will do and reflect accepted HRD theory and practice.

We also should consider carefully Swanson's (1997) assertion that some are profiting from the lack of standards in the field. "Maintaining the present substandard conditions is lucrative for profit providers of conferences and trade publications, publishers of books and media, circuit 'celebrities' and fad consultants" (p. 1-20). Can we as a professional association with our vision of leading the field through research tolerate such substandard conditions? The answer to this question reflects the values of AHRD members and informs the discussion about the importance of HRD certification.

Finally, we should acknowledge and celebrate that assuming the role of informing, educating, and protecting consumers will differentiate AHRD from the professional associations in our field that profit from hyping and marketing quick-fix, faddish solutions and products to their members and other consumers. We have answered the question about the importance of HRD certification, now we turn to the question of feasibility.

What is involved in Certification and Consumer Reporting?

In this section, we examine terminology and describe consumer organizations and aims. We also apply these concepts to the HRD profession.

Terminology

The term "certify" has been defined as "attesting as being true or as represented or as meeting a standard" (Webster's, 1977, p. 182). A certificate is a document that indicates that one has fulfilled the requirements and may practice in a field. From birth to death, certification for individuals and organizations is pervasive. Seldom do most of us even consider the alternatives. Riding in an uncertified elevator, flying with an uncertified pilot, or selecting a non-certified dentist or marriage counselor seem preposterous ideas. Is using un-certified HRD programs any less risky? Using certified professionals, products, and programs does not guarantee success; however, it does assure that certain standards have been met.

The concept of comparative product testing and consumer reporting are important to HRD certification. Comparative product testing can be defined as "determining if, and to what degree, relevant features are found to have constituent characteristics of a representative number of brands and types of a certain product" (Silberer, 1985, p. 2). Constituent characteristics are those characteristics commonly found in a specified product group. Because the results of compared products can be published and the prices of the products listed, the definition emphasizes the relationship between consumer and product. Comparative product testing has been performed for decades. From whose French fries are the best to which laundry detergent gets clothes the brightest, the comparisons continue.

The terms "certification," "consumer reporting," and "comparative product testing" emphasize determining product quality and communicating that information with consumers. Because the terms "quality" and "consumer" are key to our discussion, we turn next to those definitions.

Defining the Term "Quality"

The term quality has been defined and viewed in various ways. In this paper we present three views that are useful for discussing HRD certification. Quality as defined by the International Standards Organization (ISO) is "the totality of features and characteristics of a product or service that bear upon its ability to satisfy stated or implied needs" (International Standard ISO/IEC 9126, 1991). Technical quality is the extent to which a product meets the technical specifications for which it was designed. It is implied that the design satisfies the requirements and wishes of the consumer. Producers may restrict themselves to defining the consumer's wishes and needs without actually consulting the target group for the product (Melrose, 1996).

Quality of utility refers to the extent to which a product meets the requirements for use. The consumers' purposes can be derived from their needs and their uses for the product. In this perspective, the concept of consumers and their uses for a product are important in determining its quality.

Economic quality is the ratio between the utility of a product and its price. Consider the example of drinking the glass of water that is served free with a meal versus ordering a soda. The economic utility of water is greater than soda (assuming the desired benefit is to quench thirst and wash down food).

When comparing the three definitions, technical quality relies mostly on criteria established by the producer, whereas quality of utility relies mostly on criteria relevant to the consumer. Economic quality considers the quality of a product from the viewpoint of the consumer in terms of return on investment (Melrose, 1996).

Defining the Term "Consumer"

The consumer can be defined as the buyer, user or disposer of products or services (Kanis, 1988). Before a consumer makes the decision to purchase, he or she normally tries to assess various aspects of quality for the different brands, models and types of products or services offered. One type of assessment information consists of personal knowledge, experience or inspection of the product, or personal product information from fellow-consumers (Willenborg, 1985).

A second type of assessment information consists of commercial product information. In many cases, consumers do not have access to critical information concerning a product's characteristics, features, and functions. The product's producer or supplier is an external source of information. However, information from this source often is intended to simply promote and increase product sales. Needless to say, the information provided may be persuasive or incomplete. Moreover, the product information is seldom presented in a way that allows consumers to easily compare the information for different products (Willenborg, 1985).

A third type of assessment information consists of neutral product information. This information includes data about product characteristics that can be measured and that consumers consider when buying a product. Consumers can use product information to assess the quality of a product and to compare different product alternatives. They can also use the information to learn the correct ways of using a product (Willenborg, 1985). By comparison to commercial product information, neutral product information has an objective character and typically is supplied without any commercial purposes. Examples of this category of consumer information are the comparative product tests from consumer associations. As a result of consumer-oriented product testing, an extraordinarily high level of

voluntary industry commitments can be made to purchasers and consumers (Niedzielski, 1997).

In applying information from the certification and consumer testing literature to HRD certification, we recognize that the process would involve determining product quality and communicating it with consumers. The constituent characteristics of HRD products can be determined by using systematic processes that integrate theory and practice. Such systematic processes should begin by codifying an integrated theory of organizational performance and using it to develop and test HRD evaluation standards. The resulting evaluation standards may be used to certify the quality and usefulness of HRD products. The standards could serve as the foundation for providing neutral information to those who purchase and use HRD products. Moreover, the HRD evaluation standards could serve as drivers for change and performance improvement across organizations. The AHRD could update the standards and the certificate on a timely basis to reflect new knowledge. In this way, the HRD certification would provide an on-going driver for change and performance improvement within the profession.

Consumer Organizations: Aims and Activities

Recent decades have witnessed the rise of consumer organizations. This emancipation of the consumer has improved the position of the consumer through three distinctive avenues: 1) information, 2) education, and 3) protection. Most consumer organizations defend the free market system, and one of their most important activities is comparative product testing (Box, 1982).

Comparative product tests aim at providing objective and independent information (Silberer, 1985). The information is obtained independently of producers or suppliers and emphasizes the consumers' interests. Objectivity can be achieved by using general norms and standard procedures of measurement. Research is done either in-house or contracted to independent institutions. Often, consumer organizations show their objectivity by not including advertisements in their magazines and by stressing their independent and even critical attitude towards the industry (Jackel, 1989).

According to Kanis (1988), the most important object of research for consumer organizations is the technical and economic functionality of products. This is a measure of the satisfaction of needs. The functionality of a product results from the interaction of the product's specifications, its user, and its environment (Siderius, 1989).

The testing activities of consumer organizations encompass consumer-oriented and product-oriented research. Consumer-oriented research directly involves the consumer, mostly by means of interviews or questionnaires. Taste tests are an example of this kind of research. Product-oriented research is limited because the consumer is not involved in testing the product (Batsell & Wind, 1980).

Product characteristics generally fall into two categories: external and non-external characteristics. External characteristics can be established and evaluated by simply describing the product characteristics or making inquiries about their value. Non-external characteristics require a more extensive analysis. Typically, the evaluation of non-external characteristics is done through extended observation to determine durability, usability, and longevity of the product. Many comparative product tests focus on testing external characteristics. For example, a comparative test report for automobiles contrasts model reliability, product dimensions, and expense.

Consumer organizations produce data. In fact, comparative product testing often yields large quantities of data. Willenborg (1985) summarized the kinds of information that are often found in comparative product testing:

- Descriptive and evaluative information, which allows consumers to obtain insight about the market in a relatively risk-free and low-cost way.
- Presentation of brands, models, and types of one class of product at a certain point in time.
- Mass quantities of information (e.g., detailed description of characteristics, measurement results, comparative overall critiques of products and recommendations for "best buy").
- Limitation of sustained validity in the case of rapid model change and fluctuation of prices: typically retesting is necessary.

Regardless of the type of research used, published test results have two important functions: 1) presenting products and brands to consumers and 2) supplying comparative information on quality aspects of the products. They provide neutral product information to help consumers select products that fulfill their needs.

In applying this information to developing and implementing HRD certification, we should consider that the research could be done in-house by the AHRD, by a partner organization, or by contracting the work to independent institutions. Because many members of the AHRD are affiliated with universities and research institutions, identifying independent institutions capable of such research should not prove a difficult task. Evaluation standards that are based on an accepted theory of performance could be developed. Such standards could be applied systematically to assess the technical quality of HRD products, focusing on the external characteristics. Also, HRD consumers could be asked to provide feedback on HRD products as a means of assessing economic quality. The results could include certified products plus synthesized reports of information for consumers.

Measurement Issues

Clearly, measurement is at the heart of certification and consumer reporting. Before discussing how measurement issues can be addressed for HRD certification, we first overview the four critical measurement requirements for product testing as described by Siderius (1989). Most of these criteria are interrelated. All are necessary and none alone is sufficient.

First: Reliability.

In product testing, reliability is the degree to which repetition of the measurement produces the same or similar results. Reliability is contingent upon conformity and reproducibility. Conformity is the degree to which repetition of the measurement with different samples of a product (with identical characteristics) produces the same or similar results (product variation). Reproducibility is the degree to which repetition of the measurement on the same object produces the same or similar results.

Second: Validity.

In product testing, validity is the degree to which the measurement results reflect the functionality of a product as experienced by the consumer. Validity involves three primary considerations: internal validity, measurability, and interpretability. Internal validity is the degree to which the variables of use and the environment are included in the research conditions; measurability is the degree to which the product characteristics or functions of the product can be translated into measurable quantities; and interpretability is the degree to which the test results can be translated into different aspects of the functionality of the product. The reader should note that Siderius's description of validity focuses only on quality of utility and addresses neither technical or economic quality.

Third: Relevance.

In product testing, relevance is the degree to which the product information enables consumers to buy and use products that contribute to satisfying their needs. The products tested by consumer organizations many times are varied and random, but Siderius (1989) offers the following considerations for determining relevance:

- Importance of the product tested and its characteristics
- Degree of detail used in presenting the test results on the product's functionality
- Value judgment on certain product features relative to the product's functionality
- Availability of the product information
- Understandability or clarity of the available product information

Fourth: Feasibility.

In product testing, feasibility focuses on the amount of resources that have to be allocated to do the testing. For example, are the required methodologies at one's disposal?

To answer our earlier question about the feasibility of HRD certification, we should consider the measurement issues. Careful thought reveals that the measurement issues required for HRD certification (i.e., reliability, validity, relevance, and feasibility) are the same measurement issues that the AHRD community of scholars and scholarly-practitioners face in doing their normal work. The AHRD is uniquely positioned to assume the role of HRD certifier because its members include academicians and practitioners. Further, its members have a deep understanding of the measurement issues and respect for all HRD stakeholders. Its members also understand that, as with all efforts of HRD research and practice, no measurement system exists that is perfectly reliable, valid, relevant, and feasible. More importantly they believe that linking HRD research with practice is a way to make a difference and to produce improvements for individuals, groups, and organizations.

Benefits Of HRD Certification

AHRD certification will serve as a driver for performance improvements that benefit individuals, organizations, and the HRD profession. Earlier we discussed Swanson's (1997) assertion that some are benefiting from the substandard conditions that exist in the HRD field. Now is the time to ask, "Who pays? The answer is that we all pay. Organizations pay when decision-makers purchase substandard HRD products that do not improve organization performance. Individuals pay when they invest energy, commitment, and hope in substandard HRD products that do not produce the promised results. HRD professionals pay when the organizational members and decision- makers, who have previously paid the costs of substandard products, begin viewing HRD products as unnecessary expenses rather than investments in future performance. It is time for AHRD members to assert that the costs of substandard work are too high. We should stop paying.

AHRD certification of the programs that certify HRD professionals will drive individual change by assuring that individuals are knowledgeable and skillful in the theory and practice of HRD. It will drive organization change by motivating those who produce and sell HRD products to adapt their offerings to meet standards grounded in theory rather than in the latest fad. Vendors who can demonstrate that their products meet the HRD standards will benefit from a marketing advantage. Consumers of HRD products can use the certificate as one source in making purchasing decisions. HRD consumers and vendors both benefit from sharing more accurate understandings of organizational performance and theory and expectations for how HRD interventions contribute to it. The HRD profession benefits from the credibility that results when research informs practice and practice inform research.

Conclusion

In this paper, we argue that HRD certification provides the AHRD with a strategy for leading the HRD profession through research. We answered the question, "Why certify?" by referencing the AHRD values, the size of the HRD investment, and the problems caused by the lack of HRD certification. We answered the question, "Is certification feasible?" by examining product testing and consumer reporting in other arenas, clarifying the measurement issues, and recognizing that the measurement issues for certification are similar to those that the AHRD community of scholars and scholarly-practitioners routinely face in doing their normal work. By developing and implementing HRD certification for professionals, products, and programs, the AHRD can enact its vision of leading the HRD profession through research. Further, the AHRD can provide a service that benefits individuals, organizations, and the entire profession. Given the enormous benefits to be gained, the feasibility of certification, and the AHRD values, we believe that *now* is the time to develop and implement HRD certification.

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The Relationship Between Workplace Learning and Employee Satisfaction in Small Businesses

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Studies of HRD tend to focus on large firms even though small businesses constitute 98 percent of U.S. firms. Recent studies have found evidence of extensive HRD in small businesses. Other recent studies found a higher level of job satisfaction among employees of small firms than employees of larger firms did. This study measured the nature and extent of HRD; the level of job satisfaction among workers; and determined the correlation between HRD activities and job satisfaction in small to mid-sized businesses. The study is also looking at cross-country comparisons with Malaysia.

Keywords: Workplace Learning, Job Satisfaction, Small Businesses

For businesses in the United States to remain competitive in an increasingly global economy, some are calling for drastic measures to be taken with regard to training and developing the workforce. Business and government leaders continually lament the lack of motivation, education, and job skills of the U.S. workforce yet offer few concrete suggestions about how to remedy the problem. For the most part, business and industry has acknowledged at least partial responsibility for training and educating the workforce. In fact, it is estimated that $60.7 billion (USD) a year is spent on training (Training Industry Report, 1998).

Firms in all parts of the world invest heavily in human capital. For example, U. S. firms invest, on average, $1,800 (USD) per year per employee in training and development. British firms invest approximately $5,000 (USD) annually per employee and Germany invests an average of $7,500 (USD) annually per employee. Furthermore, estimates suggest that about 8 percent of new employees receive formal training in their first year of employment in U. S. firms and 20 percent of new employees receive such training in European firms, and 74 percent receive such training in Japanese firms (Hitt, 1998).

Developing the human resources of a company would seem to be key to increasing production and closing the gap between the level of worker skill and present and future needs. Businesses that have made training, education, and development a priority have seen it pay off through greater profitability and increased worker satisfaction (Coblentz, 1988; Filipczak, 1989). Recent studies have found that worker satisfaction is rarely tied to pay and promotion; but rather, workers are more interested in such things as feeling appreciated, being "in on things," and career development (Buhler, 1994; Dolan, 1996) all of which have linkages to workplace learning.

Job satisfaction is simply how people feel about their jobs and different aspects of their jobs. There are important reasons why organizations should be concerned with job satisfaction, which can be classified according to the focus on the employee or the organization. First, the humanitarian perspective is that people deserve to be treated fairly and with respect. Job satisfaction is to some extent a reflection of good treatment. It also can be consider an indicator of emotional well being or psychological health (Haccoun & Jeanrie, 1995). Second, the utilitarian perspective is that job satisfaction can lead to behavior by employees that affects organizational functioning, as well as a reflection on organizational functioning. Differences among organizational units in job satisfaction can be diagnostic of potential trouble spots (Beatty, 1996). Each reason is sufficient to justify concern with job satisfaction. Combined they explain and justify the attention that is paid to this important variable.

Indeed, Buhler (1994) emphasizes the point when she talks about the continued effort organizations must place on employee satisfaction and the economic importance to the company. "Organizations that believe that workers are easily replaced and do not invest in their workers send a dangerous message. This often results in high turnover, which is accompanied by high training costs, as well as hiring costs. . . .it fosters the same type of attitude in the employee, that the company can be replaced and little loyalty is felt" (1994, p. 10). These studies make it clear that companies must take advantage of all workplace learning opportunities if they are to remain successful.

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However, until recently, most studies of this nature have been conducted in large corporations. Few firms in the samples have had annual sales of less than $1 billion (USD). However, most U.S. businesses are small to mid-sized with annual sales well under $10 million (USD) (Lee, 1991).

Small businesses are playing an increasingly important role in the U.S. economy. In the course of the nineties, Fortune 500 companies "shed some 3.5 million jobs" (Dumaine, 1996, p.23). Small businesses (those employing 100 people or less) constitute 98 percent of U.S. businesses (Dumaine, 1992) and "small businesses are responsible for 82 percent of the jobs created in the United States" (Megginson, Scott, Trueblood, & Megginson, 1995, p. 247). Yet, of the more than six hundred thousand small businesses started each year, 80 to 85 percent fail in the first five years (Small Business Handbook, 1990). The economic well-being of some regions of the United States is dependent upon small businesses where the majority of businesses (88 percent) employ fewer than 200 people (U.S. Department of Commerce, (1990-91).

To date, little is known about the relationship between workplace learning and employee satisfaction in small to mid-sized companies. Studies by Des Reis (1993) and Rowden (1995) have found that such firms may not even be aware of the nature and extent of learning in their workplaces. Yet it is likely that the success of such companies is at least attributable to the ways in which employees are attended to, formally and informally trained, and developed.

Statement of the Problem

This study will establish the nature and extent of workplace learning, and delineate the relationship between workplace learning and employee satisfaction in small to mid-sized businesses in the United States and Malaysia.

Conventional wisdom says that small businesses do not have the financial resources nor the time to do very much, if any, training and development or workplace learning. This position has been supported each time quantitative research has been conducted in a variety of small businesses. However, a recent qualitative study (Rowden, 1995) found that, in fact, small businesses do engage in a considerable range of formal, informal, and incidental workplace learning activities. The information gleaned from the interviews, observations, and documents provide a new foundation upon which questionnaires can be developed that can assess the extent of workplace learning from a perspective that small businesses truly understand.

Another recent study (Anonymous, 1997) found that workers in small businesses were generally more satisfied with their employment situation than were workers in larger companies. The study found that 44 percent of the workers in small businesses said they were "extremely satisfied" with their jobs, compared with 28 percent at companies with 1,000 or more workers. The study speculated at some factors that lead to this sense of satisfaction in small businesses such as job security, empowerment, and the ability to do what they do best. While workplace learning was not one of the indicators in the study, the small business respondents reported they could learn and grow on the job. An assumption of this study is that a sense of satisfaction an employee feels about his or her employment can be directly linked to the efforts toward workplace learning

Therefore, this study establishes the nature and extent of workplace learning in small to mid-sized businesses; establishes the level of job satisfaction reported in the same small to mid-sized businesses; and establishes the relationship between these learning opportunities and the level of employee satisfaction in these organizations.

Methodology

A quantitative research design was deemed the most appropriate way to understand the relationship between workplace learning and employee satisfaction. A survey instrument was developed that captures the essence of the findings on workplace learning revealed by the Rowden (1995) study combined with the Spector Job Satisfaction Survey (1997).

As with most studies of this sort, locating appropriate businesses and gaining agreement to conduct the inquiry was very difficult. There is no central clearinghouse for small businesses. The Small Business Administration does not maintain a list of small businesses throughout the U.S. Dun and Bradstreet has a section for small businesses, but it is limited to publicly traded firms. The Private Industry Council maintains a list but it is limited to members of the PIC, and most small to mid-sized businesses are not members of the PIC. The local Chamber of Commerce maintains a membership list but it is by city or region only. The use of their list would require contacting the several hundred thousand local Chambers, and again, many small businesses are not

members.

The best means of locating a broad-based population of small businesses was through the use of INC Magazine's 1998 list of the 500 Best Small Businesses and the Forbes Private-500 list of the top privately held small businesses in the U.S. While use of such lists does constitute a convenience sample, this was deemed the most appropriate way to locate a wide variety of small to mid-sized business throughout the United States. These lists carried small businesses from all arenas and identified firms that fell within the criteria of the study.

To date, 34 companies have been contacted with three agreeing to participate in the study. These three companies have yet to return their surveys. Part of the difficulty in finding companies that will participate is the requirement that nearly all workers in each company need to complete the survey. The surveys are administered by the principle of the company (owner, president, CEO, or General Manager). Once completed, they are mailed back to the researcher. This method is less intrusive to the company.

Greater success has been had in Malaysia. There five companies have also agreed to participate in the study. These companies have returned a total of 228 surveys. The process for distribution of the survey was they same. Potential companies were identified through a relationship with the university rather than through use of a list as the country is much smaller than the U.S.

Instrument Development

There is limited research on HRD in small to mid-sized businesses. Most people believe that small businesses do little, if any, development of their workers. For example, *Training Magazine*, which conducts a huge study of the training industry in the U.S. annually, does not even attempt to contact businesses with fewer than 100 employees. Companies with between 100 and 500 workers only constitute around 16 percent of their sample.

Several attempts have been made to determine the nature and extent of HRD in small business resulting in confirmation of this notion. A review of several of the studies determined that a likely cause of the lack of discovery of workplace learning in small businesses was due to the design of the surveys. A qualitative study by Rowden (1995) did reveal numerous indices of workplace learning in small to mid-sized businesses. By looking at the transcripts of interviews of workers and field notes of the researcher, it was believed that previous attempts to capture workplace learning in small to mid-sized businesses was due in large part by the language of the questionnaire. Making every attempt to stay as close as possible to the language and references used by actual workers in small to mid-sized businesses, a survey was developed to attempt to capture the nature and extent of workplace learning in these businesses.

The research on job satisfaction in small businesses mirrors that of HRD in small businesses. Until a recent study by Anonymous (1997), little attention had been paid to worker job satisfaction in small businesses. This study found that workers in small businesses, generally, were more satisfied with their work than were workers in larger businesses. The study did not, however, seek to determine *why* the workers were more satisfied. The study mentioned ideas like better communication, a feeling of being in on things, and a smaller power distance—but none were actually measured. Again based on the Rowden (1995) study, a possible connection could be made between workplace learning and job satisfaction. To determine if this hypothesis were true, workplace learning and job satisfaction would have to be measured in the *same* small businesses. Then, correlational measures could be made to determine if small to mid-sized businesses with high measures of workplace learning *also* had high measures of job satisfaction. The Spector (1997) Job Satisfaction Survey was determined to be the best-validated and reliable instrument for this purpose. A modified version was incorporated into the questionnaire along with request for background data.

Once developed, the instrument was reviewed by area experts and graduate HRD classes to ensure for content validity. The Malaysian version required some modification for cultural differences. For example, religious education had to be added since this is often provided for by Muslim employers and the "married—not married" question had to be expanded to cover all possibilities since the feedback indicated "not married" sounded too much like a *curse* to them.

Measures

The three constructs or dependent variables for the workplace learning portion were formal, informal, and incidental learning. The formal learning scale (10 items, Chronbach's alpha = .80) included items measuring respondent's perceptions of planned, organized training activities. The informal learning scale (8 items, r = .82) included items measuring respondents perceptions of unplanned or spontaneous activities that lead to perceived learning on the job. The incidental learning scale (6 items, Chronbach's alpha = .78) included items designed to

measure respondents perception of normal workplace activities that resulted in learning even though that was not the purpose of the activity—a side benefit of the work activity.

The nine dependent variables for the job satisfaction portion were pay, promotion, supervision, benefits, contingent reward, operating procedures, coworkers, nature of work, and communication. The pay scale (4 items, Chronbach's alpha = .75) includes items measuring respondents perception of the fairness of compensation and raises. The promotion scale (4 items, alpha = .73) measures their perception of the availability and fairness of promotion opportunities. The supervision scale (4 items, Chronbach's alpha = .82) measures the respondents perception of the quality and effectiveness of supervision. The benefits scale (4 items, alpha = .73) looks at the perceived value of fringe benefits. The contingent rewards scale (4 items, Chronbach's alpha =. 76) measures the respondents satisfaction with rewards (not necessarily monetary) given for good performance. The operating conditions scale (4 items, alpha = .62) measures the respondents satisfaction with rules and procedures. The coworker scale (4 items, Chronbach's alpha = .60) measures the respondents perception of the caliber and quality of coworkers. The nature of work scale (4 items, alpha = .78) measures the respondents satisfaction with the type of work done. The communication scale (4 items, Chronbach's alpha = .71) measures the respondents satisfaction with communications within the organization. The JSS scale received a total Chronbach's alpha of .91.

Analysis

The data was analyzed in a variety of ways. First, simple descriptive statistics (means; measure of variation—standard deviations; frequencies) were employed for the surveys from each company to determine the nature and extent of workplace learning in that company, and to determine the level of employee satisfaction in that company.

Then all independent variables having both theoretical significance and adequate variability were submitted to one-way analysis of variance (ANOVA), in order to identify significant relationships and to focus subsequent analysis on key variables. Inferences were based on F-value which compared the between group variance and within group variance. The Tukey-HSD method with .05 significance level was used for the procedure. The application of one-way ANOVA was based on the test of homogeneity of variance using Leverne's statistics. In cases where there was non-homogeneity in variance, a non-parametric statistics using Kruskal Wallis test was employed.

The Pearson product-moment correlation was conducted to determine the strength and direction of relationship between workplace learning and employee satisfaction across the companies. The sign of coefficient indicates the direction of the relationship. A positive correlation coefficient (r) indicated a positive relationship, while a negative coefficient reflected otherwise. The greater the absolute value of the coefficient, the stronger the relationship, and vice versa. The significance level of .05 (one-tailed) was used in this study.

When complete, descriptive comparison will be made between findings in the United States and Malaysia

Findings

Description of the Sample

Insufficient data was available from U.S. companies at the time of this writing to allow for analysis. However, 228 respondents from five Malaysian firms have responded and those data were analyzed. The five companies consisted of a manufacturing firm, financial services (2), an educational/training company, and a non-government organization (NGO). The manufacturing firm has been in business for 11 years, employs 54 people, and has gross annual revenues of RM 3, 000,000. The financial services companies have been in business for around 10 years, employ a combined 150 people, and produce annual gross revenues of RM 360,000,000. The training company has been in business for eight years, employs 100 people, and has gross revenues of RM 3,000,000. The NGO has been in business for 12 years, employs 124 people, and while it does not generate revenue it has an annual budget of RM 2,000,000.

All the respondents worked full time. Fifty two percent were female. Twelve percent were managerial, fifteen percent were supervisory, sixteen percent were technical, twenty eight percent were administrative / secretarial, and twenty nine percent were production. Twenty nine percent were between 21 and 34 years of age, thirty six percent were between 35 and 44, twenty four percent were between 45 and 54, and ten percent were over 55 years old. Sixty three percent were married. The managers reported earning more than RM 4000 per month, the supervisory and technical people earned between RM 2000 and RM 4000 per month, and the administrative and production workers all reported earning between RM 1000 and RM 3000 per month. (at the time of this writing, the

currency conversion rate was RM 3.8 = $1 US). Seventeen percent had been employed less than one year, sixteen percent had been employed for between one and three years, twenty two percent had been employed between three and five years, twenty eight percent had been employed between six and ten years, thirteen percent had been employed between eleven and twenty years, and four percent had been employed for more than twenty years.

Results

Fifty seven percent of the respondents indicated that they engaged in formal workplace learning activities. Sixty three percent indicated that they engaged in informal learning activities. And, seventy one percent of the respondents indicated that they engaged in incidental learning activities in the workplace. Sixty two percent of the respondents indicated that they were either very satisfied or satisfied with their job, indicating a high level of job satisfaction. While the sample is limited to five companies, there is a high correlation (.87) between the levels of workplace learning and job satisfaction.

Discussion and Conclusion

This is obviously a preliminary report on a long-term project that still has a long way to go. Even so, these findings are significant for exploring the relationship between workplace learning and employee satisfaction. A number of practical implications can be drawn that are of interest to HRD and managers in companies small and large, in day-to-day operations. Additionally, it would also bear great significance for teachers of human resource development, human resource management, and management. This material could provide techniques to promote operational methods to help assure organizational success.

The majority of the respondents in these small businesses indicate that they engage in activities that relate to workplace learning; and, the respondents in these same businesses indicate that they have a high level of job satisfaction. The first major finding is that it is possible to develop an instrument that measures HRD in small businesses. This quantitative method verifies previous qualitative findings. Also, the high correlation between workplace learning and job satisfaction leaves open the possibility that further study will be able to firmly establish a link between organizations that promote learning in the workplace and the level of job satisfaction experienced by their workers. As more data comes in from companies in the U.S. additional data analysis will be conducted.

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Reframing the Andragogical Model of Adult Learning

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The andragogical model has stood for many years as a central model of adult learning. However, the model never explicitly accounted for a number of factors that may alter applicability of the core principles in a given learning situation, even though Knowles writes that the model must be adapted to fit the situation. An expanded model, Andragogy in Practice, is offered that more explicitly accounts for factors that must be considered in shaping andragogy to fit the situation.

Keywords: Andragogy, Adult Learning

In the late 1960s when andragogy and the concept that adults and children learn differently was introduced in the United States by Knowles, the idea was groundbreaking and sparked much subsequent research and controversy. Since the earliest days, adult educators have debated what andragogy really is (Henschke, 1998). Spurred in large part by the need for a defining theory within the field of adult education, andragogy has been extensively analyzed and critiqued. It has been alternately described as a set of guidelines (Merriam, 1993); a philosophy (Pratt, 1993); or a set of assumptions (Brookfield, 1986). The disparity of these positions is indicative of the perplexing nature of andragogy; but regardless of what it is called, "it is an honest attempt to focus on the learner. In this sense, it does provide an alternative to the methodology-centered instructional design perspective" (Feur & Gerber, 1988). Despite years of critique, debate and challenge, the core principles of adult learning advanced by andragogy have endured (Davenport & Davenport, 1985; Hartree, 1984; Pratt, 1988), and few adult learning scholars would disagree with the observation that Knowles' ideas sparked a revolution in adult education and training (Feur & Gerber, 1988). Brookfield, positing a similar view, asserts that andragogy is the "single most popular idea in the education and training of adults" (1986). Adult educators, particularly beginning ones, find them invaluable in shaping the learning process to be more conducive to adults.

However, these core principles are also incomplete. There are a variety of other factors that affect adult learning in any particular situation and may cause adults to behave more or less closely to the core principles. These include individual learner differences, situational differences, and goals and purposes of learning. Andragogy works best in practice when it is adapted to fit the uniqueness of the learners and the learning situation. Unfortunately, the andragogical model has never explicitly accounted for these situational differences although Knowles (1984) always stressed adapting andragogy to fit the situation:

> The andragogical model is a system of elements that can be adopted or adapted in whole or in part. It is not an ideology that must be applied totally and without modification. In fact, an essential feature of andragogy is flexibility (p. 418).

The purpose of this paper is to re-examine and update andragogy as a guiding framework for adult learning. A model is developed, called "Andragogy in Practice," which places the core principles of andragogy in a framework to make it more flexible and adaptable. This is accomplished by explicitly accounting for other factors that affect the learning situation. A secondary purpose is to clarify confusion in the literature about the exact number of andragogical principles.

The Traditional Andragogical Model

A re-examination of andragogy necessitates a brief discussion or explanation of the traditional model. Popularized by Knowles (1968), the original andragogical model presents core principles of adult learning and important assumptions about adult learners. These core principles of adult learning enable those designing and conducting

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adult learning to design more effective learning processes for adults. The model is a transactional model in that itspeaks to the characteristics of the learning transaction, not to the goals and aims of that transaction. As such, it is applicable to any adult learning transaction, from community education to human resource development in organizations.

Core Principles of Andragogy

Depending on which citation is consulted, various authors present andragogy in different ways. Accordingly, it has often been difficult to ascertain both the number and content of the core principles of andragogy. This difficulty stems from the fact that the number of andragogical principles has grown from 4 to 6 over the years. However, the addition of assumptions and the discrepancy in the number cited in the literature has led to considerable confusion.

Figure 1 shows the six principles of the current model, as well as the ones cited in Knowles' previous works. As the figure indicates, andragogy was originally presented with 4 assumptions, numbers 2 – 5 (Knowles 1980, 1978, 1975). Assumption number 6, motivation to learn, was added in 1984 (Knowles, 1984) and assumption number 1, the need to know, was added in more recent years (Knowles, 1989, 1990).

The six core principles of andragogy included in the current model are:

1. Adults need to know whey they need to learn something before learning it.
2. The self-concept of adults is heavily dependent upon a move toward self-direction.
3. Prior experiences of the learner provide a rich resource for learning
4. Adults typically become ready to learn when they experience a need to cope with a life situation or perform a task.
5. Adults' orientation to learning is life-centered and they see education as a process of developing increased competency levels to achieve their full potential.
6. The motivation for adult learners is internal rather than external.

These core principles provide a sound foundation for planning adult learning experiences. Absent any other information, they reflect the best approach to effective adult learning.

Figure 1 – Changes in core andragogical principles

	Adult Learner 5th ed. (1998)	Adult Learner 4th ed. (1990)	Adult Learner 3rd ed. (1984)	Andragogy in Action (1984)	Modern Practice – 2nd ed. (1980)	Adult Learner 2nd ed. (1978)
Need to Know	□	□	□			
Learner self-concept (self-directed)	□	□	□	□	□	□
Learner's Experience	□	□	□	□	□	□
Readiness to Learn (life tasks)	□	□	□	□	□	□
Orientation to Learning (problem-centered)	□	□	□	□	□	□
Motivation (internal)	□	□		□		

Reframing Andragogy

The power of andragogy lies in its potential for dynamic application, not as a rigid recipe for action. However, over the years the assumptions became viewed as dogmatic and unbending principles, rather than flexible assumptions to be altered depending on the situation. There is clear evidence that Knowles never intended for them to be viewed this way. For example, Knowles stated early on that:

> My intention, therefore, was to present an alternative set of assumptions to those that had been traditionally made by teachers of children, so that others would have another choice. I saw them as assumptions to be tested (not to be presumed), so that if a pedagogical assumption was the realistic condition in a given situation then pedagogical strategies would be appropriate. For example, if I were now, at age 66, to undertake to learn a body of totally strange content (for example, the higher mathematics of nuclear physics), I would be a totally dependent learner. I would have very little previous experience to build on, I probably would have a low degree of readiness to learn it, and I don't know what developmental task I would be preparing for. The assumptions of pedagogy would be realistic in this situation, and pedagogical strategies would be appropriate.
>
> I would like to make one caveat to this proposition, though: an ideological pedagog would want to keep me dependent on a teacher, whereas a true andragog would want to do everything possible to provide me with whatever foundational content I would need and then encourage me to take increasing initiative in the process of further inquiry. (1979, 52-53)

More recently, Knowles stated in his autobiography:

> So I accept (and glory in) the criticism that I am a philosophical eclectic or situationalist who applies his philosophical beliefs differentially to different situations. I see my self as being free from any single ideological dogma, and so I don't fit neatly into any of the categories philosophers often want to box people in. (1989, p. 112)

Unfortunately, Knowles never offered a systematic framework of factors that should be considered when applying andragogy. As a result, andragogy has been criticized in two fundamental ways.

First, the andragogical assumptions about adults have been criticized for appearing to claim to fit all situations or persons (Davenport, 1987; Davenport & Davenport, 1985; Day and Baskett, 1982; Elias, 1979; Hartree, 1984, Tennant, 1986). That is, andragogy appears to claim that all adults in all learning situations fit all of the assumptions. While a more careful read of Knowles' work shows he did not believe this, andragogy is nonetheless open to this criticism because it fails to explicitly account for the differences. Pratt (1988) offered a contingency approach to adult learning that explicitly takes into account variations in adults' readiness to learn in an andragogical manner by examining dimensions of the situation and learner. Because of the conceptual uncertainty, Merriam and Caffarella (1991) go so far as to say that "since andragogy now appears to be situation-specific and not unique to adults, technically it does not qualify as a theory of adult learning" (p. 250).

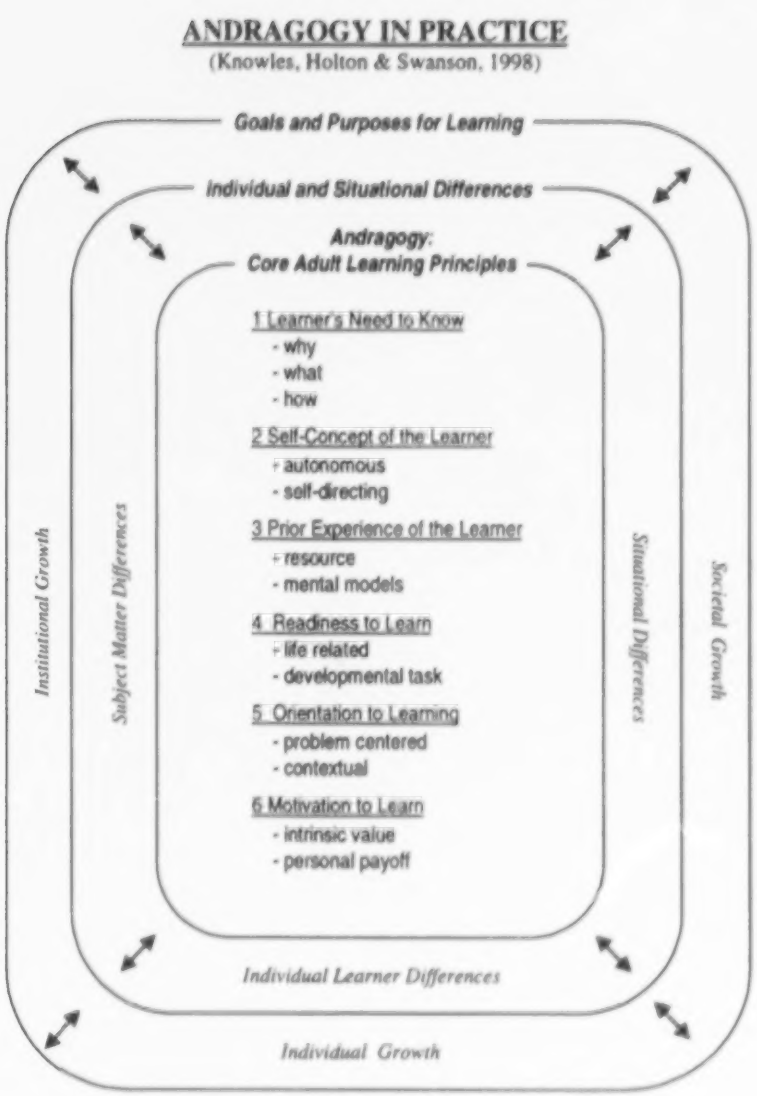
A second set of criticisms focused on andragogy's philosophical stance with regard to adult education. Grace (1996), for example, criticizes andragogy for focusing solely on the individual and not operating from a critical social agenda or debating the relationship of adult education to society. Cross concludes that "whether andragogy can serve as the foundation for a unifying theory of adult education remains to be seen" (1981, p. 227). Others have pushed for adult learning theory to reach beyond the teaching-learning transaction to encompass some elements of desired outcomes. Most prominent of these include perspective transformation (Mezirow, 1991) and a critical paradigm of self-directed learning (Brookfield, 1984b, 1987). Pratt (1993) also criticizes andragogy for not adopting a critical paradigm of adult learning.

We believe that these criticisms point to missing elements that keep it from being a defining theory of the discipline of adult education (Davenport & Davenport, 1985; Grace, 1996; Hartree, 1984), not of adult learning. What many of these critics implicitly attempted to do was to equate adult learning, and, by extension, andragogy with the discipline of adult education. Adult education as a discipline has certain philosophical foundations regarding the role of education in society and the desired outcomes from adult education (Merriam & Brockett, 1997). Andragogy's critics are correct in saying that andragogy does not explicitly and exclusively embrace these

outcomes, but they are incorrect in thinking that it should. These criticisms reflect different perspectives about the goals and purposes of the discipline of adult education, not of andragogy.

Attempts to embed the specific goals and purposes of adult education into the andragogical model of adult learning are conceptually flawed. Adult learning occurs in many settings for many different reasons. Andragogy is a transactional model of adult learning that is designed to transcend specific applications and situations. Adult education is but one field of application; others might include organizational human resource development and higher education. The debate about goals and purposes of adult education is important, but should be separated from models of the adult learning process. It seems clear that there is a need to reframe andragogy by more explicitly taking into account key factors that affect the application of andragogical principles.

Figure 2 - Andragogy in Practice Model



The Andragogy in Practice Model

Andragogy in Practice, the model depicted in Figure 2, is offered as a new approach to more systematically apply andragogy across multiple domains of adult learning practice. The three rings of Andragogy in Practice are: (1) Goals and Purposes for Learning, (2) Individual and Situation Differences, and (3) Andragogy: Core Adult Learning principles.

In contrast to the traditional model of andragogy, this new model integrates the additional influences – the uniqueness of the individuals and the situation – with the core adult learning principles. The three rings of the model interact, allowing the model to offer a 3-dimensional process for adult learning situations. The result is a model that systematically recognizes this lack of homogeneity among learners and learning situations, and effectively illustrates that the learning transaction is a multi-faceted activity. This new perspective presents a more complete model that allows for greater and more efficient application to a multitude of adult learning situations.

Goals and Purposes

"Goals and Purposes for Learning," the outer ring, are portrayed as developmental. The goals and purposes of adult learning serve to shape and mold the learning experience. In this model, goals for adult learning events may fit into three general categories: individual, institutional, or societal. Care must be taken so as not to confuse core principles of the adult learning transaction, with the goals and purposes for which the learning event is being conducted. They are conceptually distinct, though as a practical matter may overlap considerably.

Consider adult literacy programs as an example. Such programs may be conducted by an adult education center to help individuals improve life skills (an individual goal); by a corporation to improve job and organizational performance (an institutional goal); or by some other entity seeking to help a disadvantaged group of citizens improve their socio-economic position (a societal goal). While the goal differs in each of these situations, the actual learning program and desired learning outcomes may be quite similar or even identical. Therefore, andragogy is equally applicable to each scenario because andragogy focuses on the learning transaction, as opposed to the overall goal for which the program is offered. Because the goal will have an effect on the learning transaction, it must be carefully considered. For example, when offered for societal improvement purposes, extra emphasis may be placed on developing self-directedness among the learners. However, this is not part of andragogy, but the context in which andragogy is utilized.

This illustrates the strength of andragogy: it is a set of core adult learning principles that apply to all adult learning situations. The goals and purposes for which the learning is offered are a separate issue. Professionals involved in delivering adult learning programs should develop and debate models of adult learning separately from models of the goals and purposes of their respective fields within which they utilize adult learning.

The traditional view among most scholars and practitioners of adult learning is to think exclusively of individual growth. Representative researchers in this group might include some mentioned earlier such as Mezirow (1991) and Brookfield (1987, 1984a). Others advocate an individual development approach to workplace adult learning programs (Bierema, 1996; Dirkx, 1996). At first glance, andragogy would appear to best fit with individual development goals because of its focus on the individual. However, closer examination shows that andragogy's focus is really on the individual as a learner, not the purpose for which the individual engages in learning.

Adult learning is equally powerful in developing better institutions, as well as individuals. Human resource development, for example, embraces organizational performance as one of its core goals (Swanson & Arnold, 1996), which andragogy does not explicitly embrace either. From this view of human resource development, the ultimate goal of learning activities is to improve the institution sponsoring the learning activity. Thus, control of the goals and purposes really lies with the organization. The adult learning transaction in an HRD setting still fits nicely within the andragogical framework, although the different goals require adjustments to be made in how the andragogical assumptions are applied.

Societal goals and purposes that can be associated with the learning experience can be illustrated through Friere's work (1970). This Brazilian educator sees the goals and purposes of adult education as societal transformation and contends that education is a consciousness raising process. He says that the aim of education is to help participants put knowledge into practice and that the outcome of education is societal transformation. Freire believes in man's ability to recreate a social world and establish a dynamic society, and says that the major aim of education is to help people put knowledge into action. Doing so, according to Friere (1970), will enable man to change the world – to humanize it. Friere is clearly concerned with creating a better world and the development and

liberation of people. As such, it is evident that the goals and purposes within this learning context are societal. Once again though, the actual adult learning transactions fit within the andragogical framework, though with some adjustments.

Individual and Situational Differences

"Individual and Situational Differences," the middle ring of the Andragogy in Practice Model, are portrayed as variables. We continue to learn more about the differences that impact adult learning and which act as filters that shape the practice of andragogy.. These variables are grouped into the categories of individual learner differences, subject matter differences, and situational differences.

Subject matter and situational differences are the easiest to recognize and understand. Different subject matter may require different learning strategies. For example, individuals may be less likely to learn complex technical subject matter in a self-directed manner. Or, as Knowles stated in the earlier quote, introducing unfamiliar content to a learner will require a different teaching/learning strategy. Simply, not all subject matter can be taught or learned in the same way.

Similarly, different situations may dictate different teaching/learning strategies. The situational effects category captures any unique factors that could arise in a particular learning situation. For example, learners in remote locations may be forced to be more self-directed, or perhaps less so. Learning in large groups may mean that learning activities are less tailored to particular life circumstances.

Research in individual differences has been instrumental in advancing understanding of how individual differences impact adult learning behaviors. Jonassen & Grabowski (1993) present a typology of individual differences that impact on learning which incorporates three broad categories of individual differences: cognitive (including cognitive abilities, controls and styles), personality, and prior knowledge. While there remains much uncertainty in the research, the key point is clear: individuals vary in their approaches, strategies, and preferences during learning activities. Few learning professionals would disagree. At one level, merely being sensitive to those differences should significantly improve learning. Even better, the more that is understood about the exact nature of the differences, the more specific learning theorists can be about the exact nature of adaptations that should be made.

Another area of individual differences in which our understanding is expanding rapidly is adult development. Adult development theories are generally divided into three types: physical changes; cognitive or intellectual development; or personality and life-span role development (Merriam & Cafferella, 1991; Tennant, 1995). Cognitive development theory's primary contributions are two-fold. First, they help to explain some differences in the way adults learn at different points in their life. Second, they help explain why the core learning principles are exhibited in different ways at different points in life. Role development theory's primary contribution is to help explain when adults are most ready for and most need learning, and when they may be most motivated to learn.

An understanding of individual differences helps make andragogy more effective in practice. Effective adult learning professionals use their understanding of individual differences to tailor adult learning experiences in several ways. First, they tailor the manner in which they apply the core principles to fit adult learners' cognitive abilities and learning style preferences. Second, they use them to know which of the core principles are applicable to a specific group of learners. For example, if learners do not have strong cognitive controls, they may not initially emphasize self-directed learning. Third, they use them to expand the goals of learning experiences. For example, one goal might be to expand learners' cognitive controls and styles to enhance future learning ability. This flexible approach explains why andragogy is applied in so many different ways (Knowles, 1984).

Applying the Model

We turn now to an example to illustrate how to use the Andragogy in Practice model. As a general note, we have noted interesting differences in the way people apply the model, and therefore the best way to explain it. Those familiar with the six core principles of andragogy tend to want to conceptually begin in the middle of the model, working outward to adjust the six principles to fit the individual and situational differences as well as differences due to the goals and purposes. For them, the outer two rings act as "filters" through which the core principles are examined to make adjustments. Those unfamiliar with the six principles seem to prefer to start with the outer ring and work inward. For these individuals, it makes more sense to analyze the goals and purposes first, then the individual and situational differences, and then to select which of the andragogical principles fit. The core principles are then like a "toolkit" from which applicable principles are selected.

Both perspectives have merit, depending upon the application. We suggest a three-part thinking process for approaching adult learning situations:

1. The core principles of andragogy provide a sound foundation for planning adult learning experiences. Without any other information, they reflect the best approach to effective adult learning.
2. Analysis should be conducted to understand: (a) the particular adult learners and their individual characteristics; (b) the characteristics of the subject matter; and, (c) the characteristics of the particular situation in which adult learning is being used. Adjustments necessary to the core principles should be anticipated.
3. The goals and purposes for which the adult learning is conducted provide a frame that puts shape to the learning experience. They should be clearly identified and possible effects on adult learning explicated.

Where possible, this framework should be used in advance to conduct learner analysis. When used for this purpose, it is probably best to start with the outer ring and work inward. On the other hand, if one does not have much of an opportunity to analyze the learners in advance, then it may be more appropriate to begin with the core principles as a guide, and make adjustments as the other elements of the model become known. The following example will help clarify the application of the model.

A municipal government has developed a new management development program to help change the organization to a high-performance workplace. It was developed based on best practices and thinking in performance improvement leadership. The program will challenge learners' mental models of management development as it presents a new approach to managing in the public sector. An analysis of the learners indicates that they generally fit the core assumptions of the andragogical model. This presents several problems because the program can not be conducted in a completely andragogical approach. First, the ultimate goal of the program is to enhance organizational performance. Thus, learners will not have as much choice about the content of the learning (goal factor). It was determined that considerable effort will have to be devoted to convincing the learners of the "need to know" because some may not perceive they need the program. Second, most of the learners are experienced managers who consider themselves to be reasonably accomplished at their jobs. However, it is the expertise from their past experience that needs to change, so prior experience could actually be a barrier to learning (individual difference factor). Next, it was determined that few of them had engaged in self-directed learning with regard to management issues. This fact, coupled with the unfamiliarity of the material, will make self-directed learning unlikely, at least in the early stages of the program. Further complicating the design is that there is likely to be little formal payoff because public sector employment systems do not allow for performance or skill-based pay increases (a situational factor). Much of the "payoff" will be intrinsic, and learners will have to be convinced of the value. Finally, the subject matter itself will shape the learning. The approach being taught would be unfamiliar to these managers, and relies on a complex integration of theories. Thus, some portions of the program may be more didactic than others (subject matter factor).

This example illustrates how andragogy becomes more powerful by explicitly accommodating contingencies present in most adult learning situations. In addition, by separating the goals and purposes for which learning is conducted from the model of the learning transaction, the model becomes more versatile as well as more clear conceptually.

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A Holistic Model of Knowledge and Adult Learning

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This paper proposes a holistic theory of knowledge and learning. The theory posits that knowledge is consisted of three indivisible facets: explicit, implicit, and emancipatory, and that it is more important to examine the dynamic relationships among the three facets of knowledge in order to better understand different learning modes.

Keywords: Nature of Knowledge, Adult Learning, Dialectics

There are three major approaches to the nature of knowledge that have dominated adult learning literature (Mezirow, 1996). Mezirow contends that the Western rational tradition constitutes an objectivist paradigm of learning. The objectivist paradigm, or is sometimes called empirical-analytic paradigm, is a set of assumptions about reality and learning. Reality is believed to exist independently of mental representations of the world and knowledge to be objective. "The educational process is to transmit accurate representations to the real world, ideally established as such by scientific test." (p. 159). On the other hand, interpretist paradigm views knowledge as subjective and is constructed from one's experience within the frame of prior interpretation. Learning is a function of forms of life and systems of language. The third paradigm, critical theory, views learning as a transformational process. Following Habermas (1971, 1984), scholars in adult learning have critiqued the empirical-analytic tradition of the field. It is argued that the knowledge produced from such tradition has served the interests of professionalization and control, and that these interests are not emancipatory (Wilson, 1993; Thompson & Schield, 1996). From the perspective of critical theory, it is important to examine the power relationship in which the knowledge is produced and whose interest is served. The three major approaches to knowledge (i.e., empirical-analytic, interpretive, and critical) have typified efforts to define the concept of knowledge from different perspectives. These perspectives have been shaped by the examination of a limited consideration of the nature of knowledge. This paper proposes a holistic theory of knowledge and learning. The theory posits that knowledge consists of three indivisible facets: explicit, implicit, and emancipatory, and that it is more important to examine the dynamic relationships among the three facets of knowledge in order to better understand different learning modes.

Three Facets of Knowledge

All of the above mentioned three paradigms view knowledge as something there in the world, either objectively representing the reality or subjectively existing in human beings. To overcome the dichotomy of objectiveness and subjectiveness, I am arguing that we should take a holistic view. We frequently hear a saying "you need to look on the other side of the coin." In fact, there are three sides of a coin: head, tale, and edge. This principle applies to the concept of knowledge: we need to examine different facets of knowledge. Knowledge is human beings' understanding about the realities through mental correspondence, personal experience and emotional affection with outside objects and situations. This definition of knowledge has the following implications. First, knowledge exists in a state of understanding within human beings. Therefore, knowledge exists only in the interaction between human beings and the outside world. Second, knowledge is learned and cumulated from personal and social life. Consequently, knowledge is shaped by both personal inner factors and outside reality. Third, there are at least three channels that link individual inner state to outside realities: mental, behavioral, and emotional processes.

The facets of knowledge are different aspects of the way in which we know the world. We can learn not only through mental corresponding (i.e., cognitive process) but also by personal direct involvement (e.g., learned motor skills). We also know things through our emotions. Because any knowing involves a person (knower), these three knowing processes are in fact all involved and they are interrelated. Consequently, knowledge has three distinct but related facets: explicit, implicit, and emancipatory knowledge. That is to say, knowledge facets reflect different processes of knowing. A holistic theory of knowledge should include three basic facets of knowledge: explicit, implicit, and emancipatory. The explicit facet consists of the cognitive component of knowledge that represents one's understandings about the realities. Explicit knowledge is codified knowledge because it is transmittable in formal, systematic language. It is technical knowledge because it reflects one's intentional and conscious effort to understand realities to meet his/her interests. The implicit or tacit facet is the behavioral

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component of knowledge that denotes the learning that is not openly expressed or stated. In most of the cases we know more than what we think we know (Polanyi, 1967). Implicit knowledge is personal, context-specified, and therefore hard to formalize and communicate. Implicit knowledge usually comes from and exits in one's behavior, action, and accumulated experiences. However, experience itself can not automatically become knowledge. Only the learning and familiarity evolved from experience that have been confirmed to be true can be viewed as knowledge. Research has suggested that the unconscious thoughts and actions can be developed, received, stored, and recovered without the involvement of conscious awareness (Taylor, 1997). The emancipatory facet is the emotional component of knowledge and is reflected in affective reactions to outside world. Emancipatory knowledge is value-laden. It is indicated by feelings and emotions people have in relation to the objects and situations. Emancipatory knowledge defines one's view about what the world should be, and it is the result of one's efforts to seek freedom from natural and social restraints. Table 1 compares three facets of knowledge and their related characteristics.

The differences among these three facets of knowledge have both theoretical and practical importance. The explicit knowledge is based on the separation of object and subject and it serves for the interest of rationality. The implicit knowledge is established on the interrelationship between object and subject and thus is simultaneous and analog knowledge. The emancipatory facet is essential and vital knowledge that defines the meaning of an object within the subject. These three facets are different not only in nature, function, and foundation, but also in direct sources, evaluation criteria, and ultimate goals. The direct source for the explicit knowledge is logic and reasoning and it is judged by the criteria of empirical soundness, clarity, and consistency. The explicit knowledge seeks for truth and efficiency, and it tends to search for a single solution for an action that maximizes its satisfaction or utility. This facet of knowledge is facilitated by analytical intelligence and the ability to learn this knowledge facet might be measured by conventional IQ tests. The implicit or tacit knowledge derives directly from practice, experience, and recognition. It needs to be practical and communicative across situations. This facet of knowledge aims for reality, and it focuses on the effectiveness that normally requires artistic instead of scientific solutions. The ability to acquire the implicit knowledge can be viewed as practical intelligence (Sternberg, 1985, 1997). People do not just know through thinking or doing, they also acquire knowledge with their emotions and feelings. The emancipatory knowledge reflects human beings' pursuit of freedom and justice, which is advanced by values, assumptions and ethics. Serving for the quest of liberty and empowerment, the emancipatory knowledge has been evaluated by intellectual illumination and ethical responsibility. This facet of knowledge can be facilitated and indicated by emotional intelligence (Goleman, 1995, 1996). Goleman has noted that people with higher emotional intelligence tend to "have a notable capacity for commitment to people or causes, for taking responsibility, and for having an ethical outlook; they are sympathetic and caring in their relationships" (1995, p. 45).

Because these three facets of knowledge appear to be different in many aspects, researchers and theorists tend to view the concept of knowledge from one perspective or another. Consequently, only one type of knowledge seems to be valid for certain people when one facet is examined instead of a holistic look. Moreover, the academic field and related literature have been divided into camps of so called paradigms. Scholars tend to conduct their discourses within one camp or take only one perspective for the sake of consistency. Those who place their emphasis on explicit knowledge tend to examine relatively structured problems, use empirical-analytic tools of research, and build prescriptive theories and models. Those scholars who accept the implicit nature of knowledge look at less-structured problems with experiential-interpretive tools and their research outputs appear as heuristic theories and interpretations. Those who contend that emancipatory knowledge is vital for any sort of learning use such research tools as critical reflection or participatory study to probe non-structured problems, and their outcomes are normally descriptive. From a research perspective, the three facets of knowledge represent three domains of study: cognition, behavior, and affect. Each of the three domains reflects a long interest of investigation along the lines of thinking, action, and emotion respectively.

Table 1. Comparison of Knowledge Facets

	Explicit	Implicit	Emancipatory
Nature	Knowledge of rationality (mind)	Knowledge of experience (body)	Knowledge of meaning (heart)
Function	Sequential knowledge (there and then)	Simultaneous knowledge (here and now)	Essential knowledge (where and why)
Domain	Digital knowledge (theory)	Analog knowledge (practice)	Vital knowledge (spirit)
Foundation	Separation of object and subject (objective)	Interrelation of object and subject (subjective)	Object within subject (affective)
Carrier	Formal, abstract symbols & languages	Informal, concrete, and vivid experiences	Values, conscience, dignity, & ethics
Direct Source	Logic, reasoning	Practice, experience	Freedom, justice
Criteria	Empirically sound, clear, and consistency (true or false)	Workable, practical, communicative (workable or not)	Enlightening, ethical, responsible (right or wrong)
Ability to Learn	Analytical Intelligence	Practical Intelligence	Emotional Intelligence
Goal	Truth Efficiency Maximize	Reality Effectiveness Artistic	Liberty Significance Empowering
Problem Natu	Structured	Less-Structured	Non-structured
Related Theory	Prescriptive	Heuristic	Descriptive
Research Tool	Empirical-analytic	Experiential-interpretive	Critical-reflective
Research Domain	Cognition (thinking)	Behavior (action)	Affect (emotion)

Dynamic Relationships among Knowledge Facets

Although the differences among the three facets of knowledge have been long recognized, few have examined their unitary nature. While knowledge facets may come from different sources and develop toward diverse directions, as discussed above, none can simply be dismissed. A holistic theory of knowledge and learning must acknowledge all facets of knowledge. In fact, each of the three facets of knowledge provides a support needed for the other facets to exist. Explicit knowledge will exist only as meaningless facts, figures or bytes of information without the support of

other facets. People usually use "body of knowledge" to denote theories, models, empirical findings but fail to realize that these things only reflect explicit facet of knowledge. From the perspective of the holistic theory, theories and models themselves are not knowledge. They are carriers of explicit knowledge and they are simply available information when human factors are detached. As Davenport and Prusak (1998) rightly noticed, information itself is not knowledge. I think that "knowledge base" is a better term to represent explicit knowledge such as theories and models. Implicit knowledge will become random, idiosyncratic, special, and isolated events or situations without the connections of other two facets. Emancipatory knowledge will be simply emotion or affection when the explicit and implicit facets are removed. The above different terms and characteristics are divided and examined just for the discourse purpose and themselves are explicit writings with rational interest. In reality, a robust piece of knowledge consists of three interrelated facets. A holistic view of knowledge should be a dynamic dialectic among all facets.

Consideration of these facets of knowledge can be facilitated by thinking of them as angles of an equilateral triangle with the angle of the triangle being the different facets of knowledge. The inside of the triangle can be regarded as the arena of knowledge and the sides of the triangle represent interaction among the facets. While educators and researchers can view the concept of knowledge from one of the angles and work on a particular side, there is always the influence of the other two angles in the arena. Each of the angles is bounded by two angles and shaped by the inputs and influences from the other facets of knowledge. Learning can start in one of the facets and educators and learners can, consciously or unconsciously, move toward one of the directions characterized by the knowledge facets. However, any change of one facet always affects one or both of the other facets.

The dynamic relationships among the knowledge facets and related learning modes are presented in Figure 1. Three circles in the figure represent the knowledge facets and the lines with arrow refer to the interaction among the facets. It is assumed that knowledge is created through and exists in the interactions among explicit, implicit, and emancipatory facets. These relations allow us to draw at least nine modes of learning (i.e., knowledge conversion): participation, conceptualization, contextualization, systematization, validation, legitimization, transformation, interpretation, and materialization. Participation is a process of learning from practice and thereby

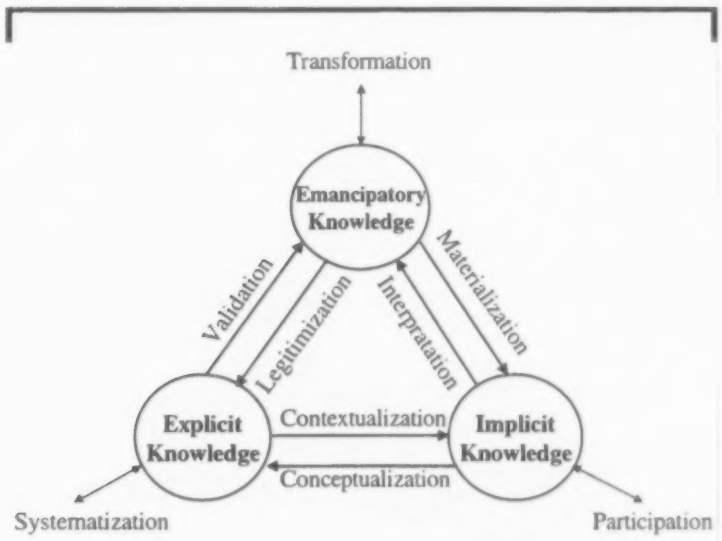

Figure 1. Three Facets of Knowledge and Implied Modes of Learning

creating implicit knowledge from experiences. The direct outcomes of the participation are unconscious mental models and technical skills such as know-how. Many learning forms such as apprenticeship, situated learning, incidental learning, interns and on-the-job-training fall into this mode of learning. Personal participation in individual and social activities will always result in implicit learning, which, in turn, develops intuitive (tacit) knowledge. Psychological studies have shown that such knowledge is optimally acquired independently of conscious efforts to learn and it can be effectively used to solve problems and make decisions (Gerholm, 1990;

Reber, 1989). If we maintain a position that knowledge is essentially implicit, then we can get a conclusion that learning can be viewed as a process of participation in communities of practice (Lave & Wenger, 1991). Conceptualization is a process of articulating implicit knowledge into explicit concepts. It converts familiarities into tangible explanations. It is a quintessential knowledge-creation process in that implicit knowledge becomes explicit, taking forms of metaphors, analogies, concepts, hypotheses, or models (Nonaka & Takeuchi, 1995). For example, a professional may summarize what have been learned from practice, reflect upon the literature in the field and write up a scholarly article for publication. The outcome of this learning process is explicit knowledge. Other professionals in the field then can learn from such explicit knowledge. The best way for them to learn is not to simply acknowledge new ideas or concepts, they have to connect and apply the new information to their particular contexts. Contextualization is a process of embodying explicit knowledge into implicit knowledge. It is the process of utilizing concepts, models, propositions in a specific context. A teacher in this learning mode examines the appropriateness of a newly developed teaching method in his/her classroom. Because there may be countless factors that affect his/her decision of adoption and the person who originally developed the method cannot anticipate all possible applicable situations, the teacher may not be able to clearly state the rationale and the process of such a decision. Therefore, such learning process that involves action or behavior will always bring about a change of implicit knowledge. Examples of this learning mode are: learning by doing, role-playing, case study, and action learning. Systematization is a process of systematizing concepts into a knowledge system with logic and reasoning. This learning process uses mind instead of body. This learning mode generally involves combining different parties of explicit knowledge in a consistent format. People exchange and combine knowledge through such forms as seminars, literature critique, or conferences. Competence-based training is a typical example of this learning mode that assumes a systematic and explicit knowledge base. Validation is a process of examining underlying values, beliefs and other kinds of fundamental learning based on explicit knowledge (which is believed to be true under rational perspective). Mezirow (1996) suggests that we establish the validity either by empirically testing to determine the truth or by appealing to tradition, authority or rational discourse. "Discourse allows us to test the validity of our beliefs and interpretations" (p. 165). Employee orientation and correctional education are two examples of this learning mode. One of the major functions of employee orientation is to assist the newcomers in learning the organizational values and expectations. It is expected that the newcomers will learn what is right and what is wrong from the standards of a particular organization, and thus change/modify their emancipatory facet of knowledge about work. Legitimization is a process of justifying explicit knowledge based upon emancipatory knowledge. For instance, many higher education institutes changed admission regulations after the civil right movement. Team building and community meetings are other examples of this learning mode. The goal of team build is to increase productivity based on trust, cohesiveness, and mutual sense of responsibility. Therefore, the essence of team building is to revise or develop explicit knowledge (i.e., clearly specified effective working conditions) by building on team members' emancipatory knowledge of the work. The effect of emancipatory knowledge on explicit knowledge can also be easily examined at the level of individual learning. One will simply reject certain information if it is contradicted to his/her fundamental values or beliefs. Transformation is a process of converting an old meaning scheme (i.e., values, feelings, ethics, etc.) into another one. It should be noted that not every transformative learning occurs in a positive direction. One longitudinal study shows that adult life experiences can result in diverse development outcomes (Merriam & Yang, 1996). For example, those who experienced a period of unemployment have expressed more sensitivity to social and economic inequality, but they felt to be marginalized, vulnerable, and controlled by external forces. Some life experiences may bring about learning with negative interpretation (Merriam, Mott, & Lee, 1996). The key to understand such complicated learning processes lies in the dynamic interactions among three knowledge facets. Some examples of transformative learning include: participatory study, non-violence action, and critical reflection. Materialization is a process of transferring emancipatory knowledge into tacit knowledge. This learning mode includes such methods as action learning, task-force, and community development. Those who utilize what they have learned from the participatory action research to improve the quality of their daily life are in the process of materialization. Interpretation is a process of making and/or revising meaning scheme from tacit learning and direct experiences. People who feel empowered and have a new look about life through a participatory action research have been involved in the learning process of interpretation. Instructional methods such as critical questioning and conscious awareness group are examples of interpretation process.

While three different and yet interrelated facets of knowledge are identified and learning modes are defined, it should be emphasized that learning rarely takes place in one domain. Examples in the previous paragraph were used to illustrate dominated learning modes for the interactions among knowledge facets. In reality, most learning activities involve more than one of three facets and a number of interactions. For example, while the main focus of a conscious awareness group is to interpret meanings based on participants' experiences, the facilitator and

participants might borrow or create explicit concept to validate their interpretation. In so called instrumental learning (Mezirow, 1990), one might involve direct changes only in explicit and implicit domains. But the emancipatory facet is also visible and it plays the function of legitimizing new information. In such learning situations, new information is congruent with one's fundamental beliefs. Most of our learning activities are instrumental rather than transformative.

Implications of the Holistic Model of Knowledge

Knowledge Facets and Paradigms of Learning and Research

There has been a lot of discussion on the paradigms of learning and research (Merriam, 1991; Mezirow, 1996). From the perspective of the proposed theory of knowledge and learning, contemporary paradigms have been evolved with emphasis on one facet of knowledge or another. The positivist or objectivist paradigm posits that only explicit facet is valid knowledge (Searle, 1993). Learning occurs as learners relate concepts descriptive of the new knowledge to previous knowledge within their cognitive structure. The integration of new and previous knowledge occurs through changes in the learners' conceptual structure. Concepts are developed and stored in a hierarchical structure. The positivist paradigm assumes that human beings are rational and take actions based on explicit knowledge. The essential element of the rationality is a conscious goal and the best action selected from all relevant alternatives that maximize the promise of reaching that goal. Unfortunately, such perspective ignores or pays less attention to the roles of unconscious learning and learning in the affective domain.

The interpretive paradigm emphasizes the implicit nature of knowledge and the changing influences of reality. Knowledge is acquired only through experiences and direct engagement in practice (i.e., participation) (Lave & Wenger, 1991). Mezirow (1990) contends that the learning process involves looking at past experiences, new experiences and reflecting on these for the purpose of making meaning. "Learning may be defined as the process of making a new or revised interpretation of the meaning of an experience, which guides subsequent understanding, appreciation, and action" (p. 1). Observing the dynamic world and the complexity of human communication, the interpretive paradigm asserts that realities are multiple and subjective and that truth is relative. Consequently, such assertion poses a dilemma. Do we want the communication of our interpretations to be as clear as if there is a single reality or, with multiple realities, a confusion that leads to no action? Such dilemma can be found from Mezirow's transformation theory. On one hand, this theory rejects positivist notion of absolute truth and it assumes that knowledge is subjective. On the other hand, this theory "seeks to establish a general, abstract, and idealized model which explains the generic structure, dimensions, and dynamics of the learning process" (Mezirow, 1996, p. 166). From the perspective of the holistic theory, all theories serve as carriers of explicit knowledge and thus have positivist elements.

The critical paradigm involves a commitment to deliberate action for justice in society where the existing social structure is seen as coercive and oppressive. It argues any adequate approach to educational theory must provide ways to distinguish ideologically distorted interpretations from those that are not (Carr & Kemmis, 1986, p. 129). Although this paradigm strongly advocates the rejection of positivist notions of rationality, objectivity and truth because of its danger to move toward hegemony, explicit learning (with a tendency of instrumental rationality) remains the major source of validation and justification (Mezirow, 1996). Without the support of two other facets, emancipatory knowledge might lead to "false consciousness".

To sum up, all paradigms have limited perspectives about knowledge and we should end paradigm wars. We need a holistic view of knowledge with a dialectic perspective. That is to say, it is necessary to realize both contradictory and confirmatory nature of knowledge. On one hand, three knowledge facets have different characteristics and move toward different directions. On the other hand, there are dynamic relationships among these facets. More importantly, knowledge is changing and learning takes place along with any change of the three knowledge facets. Consequently, while scholars and practitioners may limit their work only in one or two facets, they need to pay appropriate attention to all knowledge facets.

Implications for Adult Learning and Human Resource Development

The proposed holistic theory of knowledge provides a useful framework to reexamine conventional adult learning concepts, namely andragogy, adult development, experiential learning, feminist pedagogy, self-directed learning, and transformation theory. For instance, andragogy recognizes adult learners' experiences that can be a valid source of learning and their self-concept of responsibility. However, the dynamic relations between this learning source and other sources have not been clearly outlined. Therefore, the actual role of the instructor is not

well defined. Some instructors call themselves facilitators, yet others assume the role of experts. The proposed theory of knowledge and learning suggests that instructors have multiple roles because learning takes place in a number of modes. In one situation, which has clearly defined subject matter and consensus learning objectives, it is quite appropriate for an instructor to deal mainly with explicit knowledge and work as an expert. In another situation where learners are experienced practitioners and the objective is to exchange those hands-on experiences, one might want to assume a facilitator's role. This is because the instructor needs to provide adequate opportunities for the participants to externalize their implicit knowledge cumulated from their practice.

The difference between the concepts of andragogy and pedagogy can also be examined from the emancipatory facet of knowledge. Children in schools are normally assumed to receive knowledge and values in a passive way, and they are not expected to make the judgement of right or wrong. However, adult learners' various concerns stemmed from different value systems are legitimate contents in the adult learning process. In other words, self-directness is emancipatory right for all adults.

The proposed holistic theory of knowledge and learning also provide meaningful implications for both research and practice in human resource development. For instance, the theory suggests that we need a holistic perspective about different factors influencing the transfer of learning and performance. Traditionally, explicit knowledge has been viewed highly and thus IQ (the ability to learn explicit knowledge) has been used in many processes of human resource development such as employee selection and performance prediction. The holistic theory suggests a multi-facet nature of knowledge and learning and thus calls for a multiple intelligence approach. I believe that all three facets of knowledge are relevant in any training, though we do not have to allocate our resources and time equally among them.

Conclusions

The paper presents a holistic theory of knowledge and learning. By examining the major characteristics of three knowledge facets, it is argued that learning can be understood within the interactions among the three facets of knowledge. The conventional paradigms assume that they are divisive and thus have failed to integrate the dynamic relationships among knowledge facets. Therefore, research and theory building need to consider the nature of knowledge facets. Theories must meet the requirements of empirically sound, communicative clarity, and critical analysis (Brookfield, 1992). Clearly, more research needs to be done to test and validate the proposed theory. Because of the space limitation, this paper has largely focused on the nature of knowledge and learning at the individual level. Similar theorization needs to be done at the organizational level to explore the effective ways of managing knowledge and learning in today's ever-changing world.

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The Nature of Adult Workplace Curiosity

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A number of measurement forms have been used to guide curiosity research. An analysis of the structure and content of these measures was investigated to clarify the nature of the curiosity construct as it pertained to working adults. In this study, 233 adults ranging from 17-60 years of age were administered four well-known curiosity instruments. The scores were factored using a Principal Components Analysis and rotated to a varimax solution. Two clear and stable factors (by gender) were identified. Recommendations for future research in the field of HRD were discussed.

Keywords: Workplace, Curiosity

Robinson and Stern (1997) and others (e.g., King, 1998) have recently called attention to the relevance of adult curiosity in the workplace. King claimed that curiosity was a "natural personality trait, ...perhaps stronger in some people than in others," and it served as a basis for creativity in competitive work environments (p. 188). She stressed that from curiosity grows the motivational drive to know or learn and do more. Robinson and Stern (1997), on the other hand, considered curiosity more as a motivational state that impelled employees to seek out diverse stimuli and pursue self-initiated activities, which ultimately contributed significantly to corporate creativity. Robinson and Stern, citing the work of Arthur Koestler, declared that the intellectual curiosity we all possess leads us to explore and create, and initiate new activities. They insisted it was from these self-initiated activities that unexpected creative acts do occur. They noted further that by encouraging employees to seek diverse stimuli that promote learning about things that might not be directly related with their jobs, curiosities can be explored and possible new, unexpected, and creative applications for their learning could be found. Alternatively, in an empirical investigation of workplace curiosity, Reio (1997) determined that state and trait curiosity were both important components of successful socialization-related workplace learning and job performance. Building on the seminal work on curiosity by Daniel Berlyne (1960), he found support for the notion that curiosity and information seeking played a role in acquiring the information vital for newcomer job adaptation and job performance.

Clearly, then, King (1998), Robinson and Stern (1997), and Reio (1997) all have considered the nature of adult curiosity, either as a personality trait or motivational state, to be largely an information-seeking activity, aroused from conceptual conflicts and a lack of information, that results in creating new, useful knowledge. The problem is, this information-seeking or "cognitive" variety of curiosity may not be unidimensional (Boyle, 1983; Byman, 1993; Giambra, Camp, & Grodsky, 1992; Malone, 1981; Spielberger & Starr, 1994), nor is it the only kind of curiosity that may be of interest to learning endeavors (Bjorck-Akesson, [cf. Berliner & Calfee, 1996]).

Over the past several decades, a variety of definitions and descriptions and systems has been developed together with a wide range of new terms to describe the psychological construct of curiosity. Curiosity as a motivational state and personality trait, "sensation seeking," "exploration," "novelty seeking," and "interest" have all been used as interchangeable terms, while at the same time other researchers have considered them as being quite separate constructs (Krietler & Krietler, 1994). The structure and content of the instruments developed to measure these separate constructs, along with their theoretical underpinnings, have been scrutinized by researchers with confusing results as well. Some researchers have argued that the range of behavior described as curiosity is two-dimensional (e.g., Langevin, 1971), while others have claimed that curiosity is best thought of as being three or more dimensional (e.g., Krietler, Zigler, & Krietler, 1984). Surely, if meaningful research about curiosity and its role in various important contexts such the workplace is to be undertaken, a better understanding of the exact nature of the curiosity construct is needed.

Interestingly, almost all of the work concerning elucidation of the curiosity construct has been undertaken with children and/or college students. Langevin (1976), re-examining his prior curiosity research (1971) with a sample of Canadian children, utilized what he considered an adult sample which consisted of 53 teacher education students and 30 hospitalized schizophrenics. He concluded that the two dimensions he previously found in his factor-analytic study seeking clarification of children's curiosity (i.e., "breadth-of-interest" and "depth-of-interest") were simply artifacts of the different types of measurement forms he used. Ainley (1987) followed Langevin's research and controlled for the problems associated with his study by using a much larger sample (Australian), all the same type of measurement instruments (self-reported), and what she considered to be "adults," i.e., college students with a median age of 20 years. She concluded that Langevin's (1971) early work was correct, and curiosity

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truly consisted of two factors, breadth- and depth-of-interest. (Giambra et al., [1992] also supported using Ainley's two-factor curiosity interpretation when discussing adults of any age for ease of understanding when comparing different age groups.) Spielberger and Starr (1994), too, used university students (American) in their factor-analytic work investigating the nature of curiosity and described two distinct factors ("Information Seeking" and "Experience Seeking"), although not explicitly referring to their sample as being comprised of adults. Thus, a number of researchers have found the curiosity construct to be multidimensional, and although there may be little reason to expect that curiosity's dimensionality should be distinctly different for populations of non-college age working adults, this information gap should be explored as almost none of the research concerning adult curiosity and its nature has been undertaken with typical working adults. Even less research has been conducted about conceivable gender differences (Spielberger & Starr, 1994).

To help direct future HRD research where the full benefits of promoting curiosity in the workplace can be understood, a much better awareness of the true nature of the construct is vital. A very real need exists to make clear the possible number of adult curiosity dimensions, their interpretation, and the status and nature of likely additional factors. As an engaging area of inquiry, male and female populations of subjects other than college students needed to be investigated to assist in rendering intelligible curiosity's likely multidimensional nature. Thus, the purpose of this study was to investigate the dimensionality of the curiosity construct, with an adult working population, by gender, in an effort to gain conceptual clarity about its nature and definition, thereby hopefully facilitating future HRD research into curiosity's viability as a significant component of learning in workplace contexts and beyond.

The following hypotheses guided this research:

Hypothesis 1. The curiosity construct is multidimensional.

Hypothesis 2. The number of curiosity dimensions will be equal for both working adults and college-age adults.

Hypothesis 3. The number of curiosity dimensions will be equal for both males and females.

Method

Subjects. The participants in this study consisted of 152 men and 81 women, 17 to 60 years old, from four companies in the service industry (N=233).

Instrumentation. From the number of curiosity measures reported in the literature, four well-studied instruments with 12 subscales were selected for use in this study. All of the measures chosen were self-report, paper-and-paper questionnaires as recommended by Ainley (1987). Internal consistencies ranged between .69 and .88 for all but one of the subscales which was .48 (Experience Seeking subscale of the Sensation Seeking Scale).

The selected measures were: The Melbourne Curiosity Inventory (MCI; Naylor, 1981), the State-Trait Personality Inventory (STPI; Spielberger, Barker, Russell, Silva De Crane, Westberry, Knight, & Marks, 1980), the Sensation Seeking Scale (SSS; Zuckerman, 1979), and the Novelty Experiencing Scale (NES; Pearson, 1970).

The MCI consisted of one 20-question state and one 20-question trait subscale of curiosity, while the STPI had 10-question state and trait curiosity subscales; both were considered to be measures of information-seeking or the cognitive kind of curiosity. The NES, with its four 20-question subscales, included two subscales representing cognitive curiosity (Internal and External Cognitive; NES-IC and -EC) and two subscales representing the sensation-seeking kind of curiosity (Internal and External Sensation; NES-IS and -ES). With the sensation seeking kind of curiosity, novel sensations and changing experiences are sought out more often merely to experience them, not necessarily to acquire information and knowledge per se. The SSS consisted of four 10-question subscales measuring four dimensions of the sensation seeking kind of curiosity: Thrill-and-Adventure Seeking (SSS-TAS), Disinhibition (SSS-DIS), Boredom Susceptibility (SSS-BS), and Experience Seeking (SSS-ES). Thus, the MCI, STPI, NES, and SSS are essentially trait measures of curiosity, with only the MCI and STPI including a state curiosity subscale.

Procedure. The selected curiosity measures were administered to all 233 subjects at their places of work along with a demographic survey. The four companies, all operating in the Washington, DC metropolitan area, participated on the condition of anonymity and were fully informed of the results. The purpose of the study was first explained to each subject, and the measures were then distributed, with an average administration time of 45 minutes per individual.

Combination of the Sample. One-way ANOVAs (1 X 4 groups) were conducted and patterns of partial correlations were examined for each of the variables of this study. On the basis of the lack of a significant difference between the four groups with regards to their scores on the curiosity instruments and the consistency of

the correlational patterns, it was deemed appropriate to combine the four samples. Factor-analytic work performed later in the study further supported the sample combination.

Data Analysis. All data analyses were performed with the Statview 4.0 statistical routine.

Results

As was previously endorsed by Ainley (1987), the scores from each curiosity subscale were entered as variables in a factor analysis. Initially, the Principal Components Analysis (PCA) factor extraction method was performed on all variable scores of the 12 subscales based on the matrix of their Pearson product-moment correlations. Using the Kaiser Criterion, where all factors with eigenvalues greater than one are retained and usually rotated for the final solution, only four of the five factors were extracted.

As a general rule of thumb, after a PCA, an acceptable number of eigenvalues greater than one should be between the number of variables divided by five and the number of variables divided by three (Tabachnick & Fidell, 1989). Since there were 12 variables, one would predict having between two and four factors, and there were four.

The eigenvalues of the four identified factors were 3.63, 2.18, 1.51, and 1.25, accounting for 30.3 percent, 18.2 percent, 12.6 percent, and 10.4 percent of the total variance, respectively. Consequently, 71.5 percent of the total variance was explained by the four extracted factors. A three-factor solution, too, was examined as advocated by Boyle (1989), and Byman (1993). The three factors accounted for 61.1 percent of the total variance.

Other factor-analytic research on similar self-reported, questionnaire measures of curiosity (e.g., Ainley; Langevin, 1971) claimed, in the interest of clarity and parsimony, that two curiosity factors would be sufficient to describe the curiosity construct. Cohen and Cohen (1983) would seem to agree with this "less is more" approach, as this approach assures "more statistical test validity, more power, and more clarity in the meaning of the results" (p. 171). Recognizing that the Kaiser Criterion may over- or underestimate the number of factors (Tabachnick & Fidell, 1989), a scree test was used as a second criterion. Two factors were comfortably identified by this method (clearly supporting hypothesis one). With this in mind, a two-factor solution was examined as well and the total variance explained was 48.5 percent.

Once the set of two, three, and four factors were extracted from the correlation matrix by the PCA, they were rotated to increase interpretability of the factor solution. Thus, to increase the ease of interpreting, describing, and reporting the results, a varimax rotation (orthogonal, factor scores were generated and subsequently used for predictive procedures not part of this study) was performed, as recommended by Tabachnick & Fidell (1989). The results of the varimax rotations are located in Table 1.

Careful examination of the two-, three, and four-factor solutions yielded interesting results. With the four-factor solution, both of the state and trait measures of the MCI and STPI loaded on Factor 1. This reflects the moderate to high correlations among the MCI and STPI subscales, and the significant overlap between the state and trait measures, which supported Spielberger and Starr's (1994) findings. Only two curiosity subscales loaded on Factors 2 and 3, indicating that they may be unstable factors and should be viewed with caution (Tabachnick & Fidell, 1989). Factor 4 was also difficult to interpret because of the number of cross-loadings of the variables. Thus, the four-factor solution seemed at least somewhat suspect.

A three-factor solution, although strongly advocated in the literature by Boyle (1989) and Byman (1993), was unclear as well, as the SSS-ES loaded ambiguously on both Factors 2 ("Venturesomeness" as advocated by Byman) and 3 ("Experience Seeking" as recommended by Olson & Camp [1984]). Moreover, both the NES-IC and -EC subscales loaded ambiguously on Factors 1 ("Cognitive Curiosity" as named by Malone [1981]) and 2.

In the two-factor model, all but one of the loadings of the SSS subscales and NES' sensation subscales loaded clearly on Factor 2. The second factor closely resembled Ainley's (1987) "breadth-of-interest" curiosity factor and because of its sensation seeking nature, this factor will be called "Sensation Seeking" henceforth. Factor 1 had reasonably unambiguous loadings. The first curiosity factor closely resembled Ainley's "depth-of-interest" curiosity scale and because of its cognitive nature, this factor will be called "Cognitive Curiosity," as first proposed by Malone (1981). Consequently, the second hypothesis was supported which specified that there would be no difference in the number of curiosity factors between samples of college students and working adults. This result is particularly interesting as it has never been explored.

Upon examining the factor structures for gender differences, all of the subscales loaded almost identically for both genders. Thus, the two-factor solution was stable for both genders, fully supporting the third hypothesis.

Table 1

Varimax Rotation of Two, Three, and Four Curiosity Factors: Curiosity Subscales

Scale	Four-Factor Solution				Three-Factor Solution			Two-Factor Solution	
	1	2	3	4	1	2	3	1	2
MCI-T	85	05	02	16	85	11	04	81	04
STPI-T	84	04	02	08	84	01	01	77	09
STPI-S	84	04	01	05	82	03	02	76	03
MCI-S	80	00	10	13	80	04	09	78	08
NES-ES	02	90	11	14	11	79	18	07	76
SSS-TAS	02	90	07	06	09	74	15	08	69
SSS-BS	03	04	86	02	01	03	84	23	46
SSS-DIS	08	24	77	09	12	15	79	27	59
NES-IS	01	13	13	79	79	60	02	33	48
NES-IC	37	02	30	75	75	54	40	72	08
NES-EC	34	34	24	60	43	58	28	63	28
SSS-ES	02	01	53	55	16	35	43	13	52

Note. Decimal points excluded.
Factor loadings ≥ .30 are significant. All bold numbers are negative loadings.

Rationale for the Two-Factor Curiosity Solution. In the four-factor solution, two of the factors had but two significant loadings which indicated factor instability and need for extreme caution in interpreting the results (Tabachnick & Fidell [1989] recommended it may be best to ignore this type of factor because "one never knows if such factors are 'real,'" p. 605). In the three-factor solution, there were also a number of significant cross-loadings (4) among the variables (especially between Factors 1 and 2). Accordingly, based on the scree test, the results of this research, and prior research which favored the parsimony of the two-factor model (e.g., Ainley, 1987), a two-factor solution seemed most appropriate. Yet, are these results conceptually sound?

Malone (1981) claimed that curiosity could be best thought of as being separated into cognitive and sensory components, which the two-factor solution from this study clearly does. Langevin's (1971) and Ainley's (1987) research supports this interpretation as well. While the four-factor solution indicated that curiosity could be thought of as Cognitive Curiosity, Venturesomeness, Experience Seeking, and "Novelty Seeking," respectively, more research would be needed to determine whether the Venturesomeness and Experience Seeking factors are truly unique factors. Intuitively, the difference between the two factors is quite minor as they both encompass the orientation to experience change and variation, despite social or physical risks.

In the three-factor solution, all of the NES' subscales loaded on both the Venturesomeness and Cognitive factors suggesting the instability of the Venturesomeness factor. This is in contradiction to the interpretation of Byman (1993) who re-analyzed Ainley's (1987) original data and claimed there was a very real need to include the Venturesomeness-curiosity factor to fully understand the curiosity construct; yet, it is clear Ainley's data only called for a two-factor interpretation as the third factor in her analysis had but two significant loadings. In addition, results of her scree test called for but a two-factor interpretation. In this study, the Venturesomeness factor is not consistent between the four-and three-factor solution.

Therefore, while it is acknowledged that the four- and three-factor interpretations may have merit, there is a lack of sufficient empirical evidence to fully support them. The lack of conceptual clarity is also a concern. Thus, for the purposes of this study, a two-factor curiosity solution was deemed to be most reliable.

Discussion

These results lend support to the two-factor interpretation of adult curiosity first reported by Ainley (1987) and Langevin (1971) with college students and children, and contradicts the findings of researchers like Byman (1993) who favored viewing curiosity as consisting of three and possibly more dimensions. Moreover, there was no evidence of a single, general curiosity factor as was first predicted by Berlyne (1966), the "Father of Curiosity" and later partially supported by Langevin (1976). Rather, the factor structure of the test scores, by gender, demonstrated

the multidimensional nature of the curiosity construct by the existence of two clear and parsimonious groupings within the set of adult curiosity scales.

The findings of this study indicated that a two-factor interpretation of adult curiosity provided an appropriate classification system for curiosity with what this researcher considers as "real-world adults," placed in a real-world context like the workplace. The two-factor distinction provides clarity about adult curiosity's exact nature and definition, and would be useful for guiding further research in the field of HRD by providing a clear point of departure for exploring the role and meaningfulness of curiosity as a motivator and promoter of learning. For instance, the factor scores generated from this study could be used in regression models for predictive procedures about relevant workplace variables, as was done by Reio (1997). Further, the curiosity factors could be used in a priori proposed theoretical models to test the fit of structural models to the research data.

The results of this research help to explain the nature of adult curiosity and thus clear the path for future researchers who might be interested whether and how the Cognitive or Sensation-Seeking types of curiosity have positive or negative roles in the process of workplace learning. This new knowledge would be also be helpful in exploring which type of curiosity is more valuable in fostering workplace creativity, and in which particular situation and context. Other research directions might include: What are the best methods of promoting the two types of curiosity in formal and informal learning endeavors? Can curiosity in general be used in disparate workplace cultures to promote adaptation to change? Is the desirability of curiosity more of a cultural phenomenon that has little relevance in non-western oriented workplaces? Are there gender or ethnic differences in this social desirability as well? Is there such a thing as "too much" curiosity? The field of HRD would benefit much from such knowledge.

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The Adoption of Computer Technology and Telecommunications: A Case Study

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Helping staff use technology effectively may be the most important step in realizing the current and future investments in technology. To address the lack of technology training and staff's reaction to computer technology usage, this study used two theoretical underpinnings: Diffusion of Innovations (Rogers, 1983) and the Concerns-Based Adoption Model (CBAM) (Hall, Wallace, & Dossett, 1973). This framework provides guidance for professional development strategies for all training settings.

Keywords: Telecommunications, Computer Technology, Case Study

Since January 1997 the Center for Distance Learning Research (CDLR) has provided technology training to teachers in over 50 school districts in Texas and New Mexico. Most are small, rural districts and many are recipients of grants from the Texas Telecommunications Infrastructure Fund (TIF) and Technology Integration in Education (TIE) initiatives that support technology implementation.

Training is usually conducted at the school district sites by two trainers. Up to 20 teachers may participate in training sessions, provided that there is a computer workstation per participant. The CDLR encourages districts to use the train-the-trainer model, so CDLR trainers conduct a series of training sessions with a group of master teachers who will then train their colleagues.

The only one of these recommendations that has been strictly enforced and consistently followed is having one computer workstation per participant. In spite of strong recommendations to keep participation to 20 or fewer master teachers, many small district administrators insist that everyone be trained. The consequence is a large group of people with a large range of proficiency levels and a large range of training needs that often should be dealt with on a one-to-one basis. Unfortunately, as the group gets larger the amount of one-to-one hands on assistance gets smaller. Also, when administrators mandate that everyone be trained, many participants resent having to participate in training, particularly if it occurs on a Saturday or during the summer.

The CDLR had developed a training brochure, entitled "Teaching and Learning with Technology," with 11 training modules from which to choose. The brochure states, "These technology training modules are designed to help teachers (trainers) develop the skills and strategies for using emerging technologies in instruction and management." (1997, CLDR) The brochure was used as a menu and helped clients to identify training needs, but CDLR trainers have also conducted needs analyses to customize training to needs beyond menu offerings.

During the first year, most of the training focused on the brochure menu items that were organized as modules, and included basic computer applications. In 1998, training emphasis moved from basic computer applications to telecommunications applications. Using the Web-Across-the-Curriculum became the most popular training topic, even for those with little or no experience with technology. A second fast growing training topic is "Web Publishing" where individuals can develop skills and strategies for adapting course materials to the Web. To respond to the growing interest in distance learning, we redesigned our brochure from its modular format into three strands in the areas of Technology and Teaching, Distance Learning, and Putting It All Together. Each of these strands incorporates several topics. The new brochure states that, "These strands are designed to help educators develop skills and strategies for a distance learning environment." (1998, CDLR).

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Theoretical Framework

The Office of Technology Assessment (OTA) issued a report on the integration of technology in our nation's schools (1995). Schools in the United States had 5.8 million computers for use in instruction, about one for every nine students. While 75 percent of public schools had access to some kind of computer network, and 35 percent of public schools had access to the Internet, only 3 percent of instructional rooms were connected to the Internet (OTA, 1995). Currently, most funds for technology have been spent on hardware and software. On average, schools have devoted no more than 15 percent of technology budgets to training. Helping staff use technology effectively may be the most important step in realizing the current and future investments in technology (OTA, 1995).

To address the lack of technology training and staff's reaction to computer technology usage, this study used two theoretical underpinnings: Diffusion *of Innovations* (Rogers, 1983) and the Concerns-Based Adoption Model (CBAM) (Hall, Wallace, & Dossett, 1973). This framework provides guidance for professional development strategies for all training settings. It is imperative that we further adopt computer technology and telecommunications as an innovation in business, industry, government, health care, etc. As more and more entities mover toward technology driven training, and follow-up studies, we must understand when and if transfer is taking place.

Rogers defined an innovation as an "idea, practice or object that is perceived as new by an individual or other unit of adoption" (1983, p. 11). Diffusion is the "process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 1983, p. 10). The innovation-decision process is the "process through which an individual (or other decision-making unit) passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision" (Rogers, 1983, p. 20). This process consists of a series of actions and choices over time with varying stages. There are also influences on the process, such as the prior conditions, characteristics of the decision-making unit, the perceived characteristics of the innovation, and communication channels.

Because all individuals in a social system do not adopt an innovation at the same time, it is helpful to place individuals into adopter categories, (classifications of members of a system on the basis of their innovativeness). The innovativeness dimension, as measured by the time at which an individual adopts an innovation, can be partitioned into five adopter categories: innovators, early adopters, early majority, late majority, and laggards (Rogers, 1983).

Another adoption model, Concern-Based Adoption Model (CBAM), was developed by Hall, Wallace and Dossett in 1973. The concept of "concerns" has been described as "the composite representation of the feelings, preoccupation, thought, and consideration given to a particular issue or task. Depending on the personal make-up, knowledge, and experience, each person perceives and mentally contends with a given issue differently; thus there are different kinds of concerns" (Hall & Hord, 1987, p. 59). This model views change as a process rather than an event and examines the various motivations, perceptions, attitudes, and feelings experienced by individuals in relation to change (Hall et al., 1973). Change entails an unfolding of experience and a gradual development of skill and sophistication in use of an innovation. An individual's concerns can move in developmental progression from those typical of non-users of an innovation to those associated with fairly sophisticated use.

The theory and research of Hord and associates showed that there was a general pattern to the intensity of the different stages of concern, and that changes in this pattern can be linked to the change process as it unfolds (Hord, Rutherford, Huling-Austin & Hall, 1987). At the beginning of a change process, the typical "non-user" has concerns that are relatively high in *Awareness*, *Information*, and *Personal* (self-concerns). Non-users or low users are more concerned about gaining information about the innovation and about how change will affect them personally. As they begin to use the new program or innovation, concerns become more intense in the area of *Management* (task concerns). As a teacher becomes more experienced and skilled with an innovation, the tendency is for concerns at the lower stages to decrease in intensity while those in higher stages such as *Consequence*, *Collaboration* and *Refocusing* become more intense (impact concerns).

Concerns theory and research reveal that concerns change over time in a fairly predictable, developmental manner (Hall & Hord, 1987; Hord et al., 1987). If we can predict how concerns will change throughout the phases of the change process, we can design in-service and other intervention activities to address those needs.

The success or failure of a training innovation clearly rests with the trainers. Training programs must integrate technology very early to be effective. Train-the-trainer programs must model how to use the technology in the teaching and learning process. The idea is not only to teach them how to use the hardware and software, but how to integrate it seamlessly into the curriculum. Otherwise, it doesn't work..."(Siegel, 1994, p. 34). Thus, hardware,

software, and professional development share an interdependent relationship (Dyrli & Kinnaman, 1994; OTA, 1995).

Purpose of the Study

The purpose of this study was to determine the role of professional development and training in the adoption of computer technology and telecommunications in a training case study. Research questions included:

1. What were the percentage of concerns that were self, task, and impact of high, middle and low-using computer technology and telecommunications users?
2. To what extent did the findings match or not match Rogers' diffusion of innovation research (1983) and the Concern-Based Adoption Model (Hall, Wallace & Dossett, 1973) for innovation and diffusion?
3. What were the factors that made an impact in the diffusion process and how might these training environments further enhance professional development and interventions for diffusion?

Case Description

Calvert ISD is a good example of a complex partnership between the CDLR and a school district. The partnership includes technology planning and program development, technical support, and training for teachers, administrators and technology coordinators.

Calvert, in east Texas, is approximately half way between Dallas and Houston. It has a population of approximately 2,000 and is located about 30 miles north of the CDLR, and is 30 miles from the nearest moderate sized community. Both Robertson County and the community of Calvert are rural in nature with a farm-based economy. Calvert has no non-agricultural based industries. The nature of the terrain limits farming, so the land is basically used for grazing by food animals.

The school district has two schools and an enrollment of 333 total students. Over 92 percent of students have been identified as economically disadvantaged based on eligibility for free and reduced priced school lunches. Ethnic diversity of students is as follows: 81 percent African American, 10 percent Latin American and 9 percent European American.

The Texas Education Agency categorizes Calvert ISD as a "property poor" district and has poor physical facilities. For example, the junior high/high school building was constructed in 1920. With a small economic base and low tax income, Calvert had lagged behind other districts in implementing an effective technology program prior to 1997. Prior to 1997, technological assets at the high school consisted of 35 computers in laboratory settings, none of which were capable of accessing the Internet.

The overriding problem for Calvert students and community members continues to be the perpetuation of poor academic achievement from generation to generation. This is evident through minimal ability to meet state academic standards. The district's most serious academic deficiencies are in reading and mathematics as evidenced by scores on the Texas Assessment of Academic Skills test (TAAS). In spring 1997, only 45.8 percent of students met minimum expectations on the reading portion of the TAAS, and 38.7 percent met minimum expectations on the mathematics portion.

In fall 1996, the CDLR began providing technology planning assistance to Calvert ISD. District administrators had drafted a proposal for Technology Infrastructure Funding, and needed help in editing and refining the proposal and developing its technology component and budget. The technology planning and grant writing process involved close working relationships between CDLR staff and the Calvert superintendent and secondary principal, several visits occurred between the two sites. Calvert met the two TIF selection criteria in that more than 70 percent of its students are economically disadvantaged and the district did not have direct connection to the Internet at the time of the proposal. Consequently, the junior high/high school campus received a TIF grant in the amount of $385,000 in the first round of TIF funding.

Calvert ISD contracted with the CDLR to provide both technical support and training. Technical support included installation of their local area network and computer equipment. In addition to a fully networked laboratory, a computer with Internet access was installed in every classroom, and the principal's office. The training component included at least 10 days of teacher training, 2 days of administrator training, and 4 days of technical training. The teacher training dates were scheduled before the technology was completely installed.

Administrator training included system administration and expansion strategies as well as development of strategies for supporting teachers in integrating technology into instruction and management. Administrator training occurred in a 2-day workshop conducted at the CDLR. The Project Manager and Technology Coordinator received

at least 4 days of technical training that included skills and knowledge for maintaining equipment and software, such as routine maintenance, administrative tasks, troubleshooting procedures, and system upgrading procedures. Technical training occurred informally as needed during visits to the campus by CDLR technical personnel.

The first three teacher training engagements were completed before the technology system was actually installed at the school site. This group was very excited about receiving the grant and the administration hoped to engage the staff in training while the excitement was sustainable. Ten administrators and teachers came to CDLR for one day of initial training in May 1997. Two trainers took the group through the *Using Windows 95* curriculum. A month later, one of the trainers met with the high school principal and provided two hours of one-on-one training on Windows 95.

In July, thirteen teachers and administrators attended two days of training held in the computer lab of College Station High School. Two trainers took the group through *Point and Click (Navigating in Windows 95 Environment), Word Processing with Word 97, and Classroom Presentations with PowerPoint* curriculum. The evaluations from these sessions of training were very positive and enthusiastic, both of the program and the trainers. Feedback included comments that indicted that some participants needed to move through the materials a little slower, and all participants indicated that they needed time to practice the new skills. Evaluation and feedback from the participants remained positive throughout the training sessions.

By the scheduled August training, the computer lab had been installed in Calvert ISD. Two days of training were included in the in-service meetings just prior to the beginning of the fall semester. Two trainers took sixteen participants through a review of word processing skills and *Spreadsheets using Excel 97* curriculum. The review proved to be very beneficial, as many participants had not had the opportunity to practice skills learned in earlier training and several had not attended the previous training sessions. The group was taught how to develop their grade books using Excel software; each teacher received his/her student lists and set up their class roles. Discovering how easy it proved to be to average grades was a selling point for several doubtful teachers - this new technology system was indeed worth it!

On September 8, two trainers introduced email to seventeen participants. The system was not totally stable; therefore participants were introduced to email on Microsoft Outlook and were able to email among themselves within their own network. This training was scheduled from 3:00 to 5:00 PM after school classes had dismissed. Students were still present on the campus. This and other duties and responsibilities kept teachers from being able to focus on the training. The training team returned on September 20. By this time the system was more stable. The two trainers reviewed the email process and introduced the Internet. Participants continued to request more time on the computers to practice and explore new sites. One of the favorite web sites that this group discovered and continued to enjoy was the Blue Mountain Electronic Greeting Cards. For months following the training, the group sent each other and friends animated, on-line greeting cards from this site. Trainers received cards from the teachers as well as various requests assistance email.

Two additional trainers, an undergraduate student worker and a graduate assistant, were added to the team for the October training sessions. The team taught the participants to employ key word searches using various web search engines. The curriculum utilized Yahoo, Infoseek, AltaVista, Excite, the ERIC database, and several on-line dictionary and encyclopedia services. The afternoon was spent exploring collaborative web based projects. Using the curriculum, *Virtual Architecture: Designing and Directing Curriculum-Based Telecomputing* (Harris, 1997), as a guide, the group located and reviewed web sites that involved information exchange. It was at this point that members of the group began to experience the overwhelming amount of resources that were now available to them and to their students through the Internet.

Three of the training team members returned to Calvert during a regular school day later in the month. The trainers met individually with each teacher during his/her conference period to address specific staff development needs. Many of the teachers reported that they appreciated this individualized attention and asked questions that they were not comfortable asking in front of the large group.

In November, three trainers continued to guide the participants through the remaining two activity structures: information collection and analysis and problem solving. The session commenced with the group in a brainstorming activity, identifying powerful learning experiences. At points during the training, the participants shared with the group interesting web-based educational projects that they had reviewed and related them to the powerful learning experiences that had been identified earlier. The training concluded with guidelines to design a collaborative web-based project.

Methodology

This study used naturalistic inquiry as the methodology. This methodology allowed the researcher to develop working hypotheses and grounded theory within the context of the schools. The interview process began with the school principal and superintendent and then used the snowball sampling technique (Babbie, 1989) for suggestions of additional respondents. Site technology coordinators, technology trainers, learning specialists, external consultants, and high, middle, and low-using computer technology teachers were interviewed. All of the respondents and school levels were coded to ensure confidentiality by using a one or two letter designation and number corresponding to the type of position in the school and the consecutive order of the interview.

For this study a variety of qualitative methods were implemented to help "ensure truth value, applicability, consistency, and neutrality:" (1) prolonged engagement and persistent observation, (2) interview protocol development, (3) the interview process, (4) member checking, (5) triangulation, (6) and a reflexive journal (Erlandson, Harris, Skipper & Allen, 1993). The constant comparative method was used for the data analysis (Lincoln & Guba, 1985). This method includes four stages: (1) comparing incidents applicable to each category, (2) integrating categories and their properties, (3) delimiting the construction, and (4) writing the construction. For the first stage, the researcher studied the transcriptions and reconstructions to determine trends in the data from the varying perspectives. Each idea (unit) was initially listed without placement into categories. The investigator drew upon tacit knowledge in making these initial judgments for early category formulation.

The transcriptions were analyzed (Newlove & Hall, 1976) to give a glimpse of the individual concerns and innovation-decision process. As concerns were identified in the interview transcriptions, tally marks were made to determine percentages of concerns (self, task, and impact). Delimiting of the construction occurred as the data sources became saturated and the categories integrated.

The analysis of the interviews of principals and technology trainers provided additional insight into needed professional development strategies. This data will be discussed in the concluding sections.

Research Findings

The researcher did not pre-determine the profiles of the subjects in this study. Respondents were selected based on the nominations of their peers or supervisor, regardless of subject matter taught, total number of years teaching, and how they were trained or received exposure to technology; an 87% response rate was obtained in this study. The findings of this research are summarized into years of teaching experience, percent concerns expressed (self, task, and impact), and how teachers received their technology training/experience. The profiles of high, middle and low using teachers provide a snapshot of the use of computer technology and telecommunications.

Teachers were placed into user categories; by combining the data into high, middle and low teacher profiles, trends were more obvious. Average totals were included at the end of each user category. Notable trends were found in years of experience, percent concerns and technology exposure.

Years of experience revealed differences between high, middle, and low users of technology. High users averaged 17.5 years of experience compared with low users at 10.0. Teachers who were relatively new to the profession, but who felt comfortable in their teaching and/or technology, were most often high users.

In the areas of concerns and training exposure, concerns of **high** users were most often **impact** and **task** concerns as compared to **low** users whose largest concerns were **self**. Middle users fell in between. Specific examples of expressed concerns were used to develop the recommendations at the conclusion of this paper. In addition, training/exposure to technology showed that 11 out of 13 high users of computer technology and telecommunications had access to a computer prior to this study. Most "learned by doing" rather than courses or workshops.

Table 1

Code	Years of Subject Experience	Subject	Concerns			User of Technology		
			Self	Task	Impact	High	Medium	Low
1	18	Reading	☯				☯	
2	9	Math	☯					☯
3	16	Administrator		☯		☯		
4	14	Science			☯		☯	
5	20	English		☯			☯	
6	6	English			☯		☯	
7	14	Business			☯	☯		
8	5	Math		☯		☯		
9	31	Administrator			☯	☯		
10	20	All Subjects			☯	☯		
11	5	Science	☯					☯
12	23	Science		☯		☯		
13	19	History		☯		☯		

Conclusions

Conclusions are based upon the original research questions. In responding to research question #1, the percentage of concerns that were self were 23%, for task were 38% and for impact, were 39%. As for as how the teachers fell on the continuum of users of computers and telecommunications, 23% were high users, 46% were middle users and 31% were low users. Those responding with high concerns for self most often submitted arguments as to why they felt their positions would not ever be replaced with a computer.

In the second research question, the findings closely matched Rogers' diffusion of innovation research and the Concern-Based Adoption Model for innovation and diffusion. The high users in this study matched Roger's innovators and early adopter category by demonstrating more opinion leadership and risk taking tendencies. Higher users of technology had a more favorable attitude toward change, were more able to cope with uncertainty and risk, less fatalistic, had higher levels of motivation, more social participation, and greater exposure to communication channels. Higher users of computer technology actively sought information about training, software, and applications to the classroom and were more likely to be participating in leadership positions, such as technology or site based management teams. The middle users were more deliberate, succumbed to peer pressure and were more skeptical and cautious. The low users matched Roger's laggards with less interest, more suspicion and resistance.

The stages of concern were an indicator of the diffusion process in a different way. For example, the interactions with a person who has high *self* concerns may be quite different from those with someone with high *impact* concerns. Movement through the stages of concern cannot be forced, but, with appropriate support and assistance, can be facilitated. At the same time, a lack of assistance or the wrong kind of support can interfere with developmental changes in concerns. Concerns are influenced by participants' feelings about an innovation, by their perception of their ability to use it, by the setting in which the change occurs, by the number of other changes in which they are involved and, by the kind of support and assistance they receive as they attempt to implement change (Hord et al., 1987).

In regards to the final research question, several factors contributed to the overall diffusion of computer technology and telecommunications. The degree of computer technology and telecommunication diffusion in this case, the concerns of personnel, and administrative factors all work together in the change process. It is evident that the diffusion process is a complex, dynamic continuum, with many factors influencing the change process. By understanding the types of individual concerns and the relationship of concerns to the use of an innovation, an entity can develop a professional development model and interventions for diffusion. "Based on research with concerns-based concepts, it is clear that the day-to-day actions, or interventions, are keys to the success or failure of change attempts. Indeed, these interventions are the keys to understanding the dynamics of facilitating change" (Hall & Hord, 1987, p. 142). According to Hall and Hord, "an intervention is an action or event or a set of actions or events that influences use of the innovation" (p. 143). Intervening engages many actors who work with many targets in a variety of ways to make change happen. Formal training is obviously necessary, and informal monitoring of implementation must occur regularly.

Recommendations

Interventions must be logically related to the needs of staff and the use of the innovation. Through communication and information transfer, individuals begin to network informally about the possible benefits of the innovation. Through formal training and professional development, individuals gain the skills, knowledge and attitude to be successful with the innovation. Individuals must not only have training on the use of the technology, but on how the innovation can become a part of their training or teaching repertoire. The train-the-trainer model allows individuals to develop units and teaming with technology as a tool, not the focus (Siegel, 1995). Concentration on technology to the exclusion of human factors is a prescription for failure.

There are six distinct categories of interventions: (1) developing supportive organization arrangements, (2) training, (3) consultation and reinforcement, (4) monitoring, (5) external communications, and (6) dissemination (Hord, et al., 1987). Intervening engages many actors who work with many targets in a variety of ways to make change happen. Based on this researcher's findings and data analysis, following are recommendations for practice specific to diffusion of computer technology and telecommunications. These recommendations are listed with consideration for the human factors first. Although these recommendations are made for the school studied, implications exist for the consideration or application of these recommendations in other environments.

Interdisciplinary teams/clusters should be formed; one teacher should be placed on each team who is more knowledgeable technologically to help integrate technology throughout the team. This could also be achieved by having at least one "tech" person on each wing/hall and or content area and preferably giving that person an extra conference period to help facilitate individuals in the vicinity of the building or academic area. This enables proximity and similar interest to help infuse the technology in a non-threatening environment. The technology leader on each team should have additional training and exemplify the characteristics of innovators or early adopters (Rogers, 1983).

In-service training and college courses are still lacking and are not the solution for a quick fix! Teachers training teachers works best, but takes longest. For this school, informal training was most effective. The peer pressure and informal network of placing technology experts on each team will enable the low users to gain knowledge and skill, without becoming angry that it is forced upon them. If training is initially directed to those who are interested and motivated, these teachers can train the other teachers (and be placed on the interdisciplinary teams.

The school in this study had many technological resources. Most of the teachers are using the technology, at least for management tasks. Being a new teacher or a low user in these schools could be intimidating. Most teachers do not want to admit that they do not know procedures. There should be an orientation program for new teachers to demonstrate what resources are available and the procedures for using those resources. The new and low using teachers have more self concerns and need more support and guidance. A collegial mentor program, where a new or low using teacher is matched with a peer who is "just a step ahead of them," will allow these teachers to have many of their personal concerns addressed. This person should **not** be a technology trainer or high user, because the knowledge/skill gap is too great. It was indicated in this study that middle users act as helpers to the low users and are not as intimidating because they have recently been through the learning process. This collegial relationship needs to be non-threatening and related to the individual's subject area or managerial needs. If teachers see the benefit of saving time to average grades, or the integration of technology into an existing unit, these teachers will begin to overcome the resistance.

Diffusion and change studies can be translated into a variety of different contexts and to a vast array of innovations. With the introduction of computers in schools, there are significant changes in the school organization

and roles of the teachers, administrators, parents, and students. In order for education to institute change, it is imperative that school personnel understand the diffusion process and its implications for success or failure of innovations.

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Distance Education: Examining Emerging Standards and Instructional Practice via Videotaped Content Analysis

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Previous research shows that traditional-type instructional strategies are being used in distance education because there has been no training to distance teach. Secondary data, however, appear to suggest emerging practices which could be pooled toward the development of standard practices to distance teach. The findings of this study revealed that of the emerging practices suggested by proponents and by faculty who teach distance education courses, few were practiced, and those practiced were used minimally.

Keywords: Distance Education, Higher Education, Instructional Delivery Methods

This study was conducted against the background that as distance education changes the landscape of education and training, traditional trainers and instructors will need to adapt or change strategies to be effective. In fact, Holmberg (1995) has noted that faculty need information about dialogue and discourse in distance education as opposed to the distribution of distance education. Charp (1998) has noted that "with all the studies and documentation available, research on why and how use of technology is effective in education remains minimal" (p. 6). As technology improves and the wave of distance education programs grows, it will be necessary to evaluate if traditional instructional delivery methods will yield the best results in distance education or whether other methods *would make* distance education more effective and even superior.

Problem Statement and Theoretical Framework

The need for this research was based on the concept widely held by experts, that distance education is different from traditional education, and that instructional delivery methods for distance education should, therefore, be different. It would appear that instructional delivery methods are key factors for effective distance education (Black, 1992; Cordover, 1996; Dillon, Hengst & Zoller, 1996; Holmberg, 1995). From the perspectives of students "talking heads prevail." Students reported in one study, that "their instructors used a variety of teaching strategies–with lecture and discussion as the two most common" (Bozik, 1996, p.99). Research is therefore necessary to examine what instructional standards exist, and how higher education faculty practices these. This study sought to answer following research questions: (a) To what extent are standard practices being followed in instructional delivery?; (b) What is the faculty's rationale for the instructional delivery methods implemented at the higher education level of distance education?; and (c) What are the factors that cause some faculty to practice more of the emerging standard delivery methods than other methods in distance education?

A number of theories informed this study. According to Keegan (1993), "distance education can be seen from the perspective of three developmental stages—correspondence, teleconferencing, and computer-based learning" (p. 17). Keegan believed that the foundation theories for distance education essentially lie in the grounded theories of general education. However, he was quick to point out, "but not within frameworks of group-based, oral instruction" (p. 66). His revised view of the theoretical approach for distance education was motivated by Peters' concept of industrialization in distance education that "from many points of view conventional, oral, group-based education is a pre-industrial form of education" (in Keegan, 1986, p. 81).

Garrison's facilitation approach has been that of "communication and learner control" (1989, p. 36). Underlying this notion has been the necessity for two-way communication and the necessity for interaction with the teacher. Garrison saw the distance learning process as a facilitated one, and technology as necessary for this interaction. He has argued that technology and distance education were inseparable and that theory and practice in distance education have evolved based on the increasing sophistication of instructional technology.

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Instructional Theory in Distance Education

Ostendorf (1989) pointed out that television has been generally considered an entertainment medium where participation is passive. The challenge for the distance education faculty in higher education then has been to use a passive medium to generate action in students. She has offered suggestions such as combining lecture with a pre-distributed worksheet with intentional blanks to be filled in. "This technique is especially useful for a complex topic that would be difficult to cover in less than 10 minutes" (p. 23). Hudspeth and Brey (1985) demonstrated how visuals can eliminate the "talking head" through creative planning:

> The faculty outlined the teaching points, shot and edited several rolls of color slides that they used by projecting pictures on a white piece of cardboard in the studio (picked up by one of the two studio cameras), and prepared an excellent supplementary program on word processing. This was not a "talking head" program. Between a simple chalkboard and 35-millimeter slides, teaching points were adequately visualized and few students realized that this was a very low cost production. (p. 56)

The importance of interaction in distance teaching has given way to interactivity becoming a generic term of distance education. It is believed that for distance education to be truly effective, instructional delivery methods should be interactive. Interactivity has some limitations, however. For the most part, active class discussion is one of the most common methods, but with large groups this interactive method could become unwieldy and defeat the purpose for which it was intended. Cranton and Weston (1989) have maintained that the group should be small and probably under 30 in a face-to-face situation if everyone is to participate. Of course, for the television teacher, there should be no such thing as a group in the teaching transaction even though the instructor is aware there is 100 individuals grouped together. The medium of television caters to one in a mass at all times, which is another reason why television teaching should be different from face-to-face traditional classroom teaching. However, we believe the size of that group becomes important when instructors want to call on each student for individual feedback and in considering turnaround time for feedback on written assignments and personalized instruction. Cranton and Weston (1989) have added that the reservoir of resources which adults bring to the learning experience should be utilized. The "emphasis can be placed on discussions, problem-solving exercises, group work, case studies, role-playing, simulations and field experiences" (p. 8).

Adult Learning Theories

It would appear from the literature that there is no one theory which could singularly describe how adults learn. Gagné (1985) has suggested certain relationships, which are essential, ranging from gaining attention to enhancing retention and transfer. Behaviorists such as Thorndike (1928) and Skinner (1974) attribute adult success in learning to their ability to remember only for utilitarian reasons and through repetition. However, central to distance education must be the theory of self-directed learning. The idea of self-directed learning was anathema to the traditional pedagogy to which people had grown accustomed. It was this perception of self-directed learning that propelled both Houle (1984) and Tough (1978) to carry out studies that would define self-directed learning as another method of adult learning.

Methodology–A Content Analysis Approach

For the purposes of this study the institution and the participants were assigned pseudonyms to preserve the anonymity of both. The institution is herein referred to as Sunny University and the participants (N=5) are Ashley, Francis, Jerry, Sydney and Toni, all of whom were full-time faculty at Sunny University–a four-year traditional institution. This was a qualitative study which employed the constant comparative analysis approach of Strauss & Corbin (1990) as applied to videotaped content.

A sample of videotapes representative of all courses (Spring (1997) semester) and participating faculty (N = 5) was selected for observation and content analysis. Content analysis is not normally employed as a data collection procedure for instructional content, and, to date has not been used in distance education research. This study represented a unique opportunity to apply a traditionally media-related research technique to educational data. Cognizant of the increasing impact of media-related technologies on distance education, the researchers combined theoretical sensitivity and existing theories with content analysis to design a time-sampling technique unique to videotaped instructional content (see Figure 1).

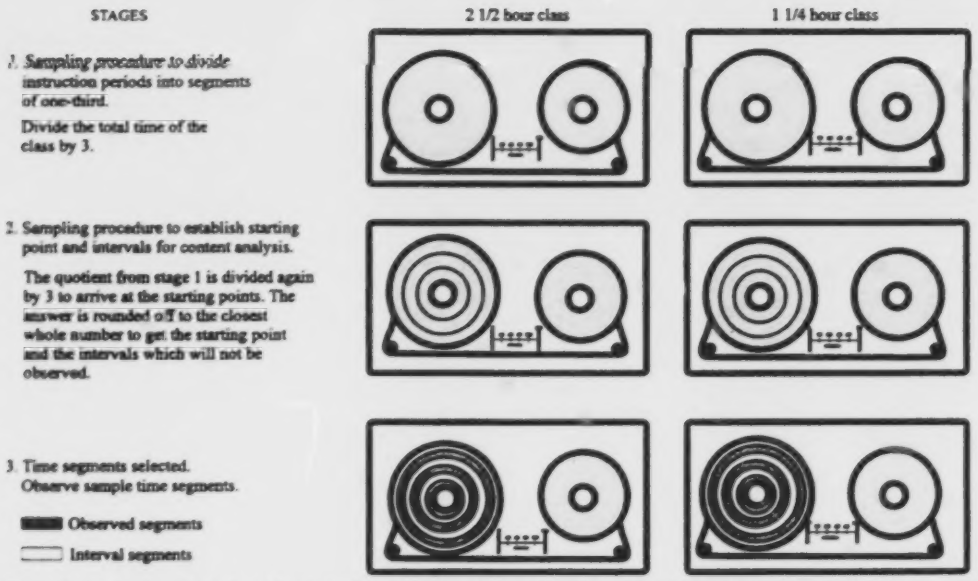
STAGES
2 1/2 hour class
1 1/4 hour class
1. Sampling procedure to divide instruction periods into segments of one-third.
Divide the total time of the class by 3.
2. Sampling procedure to establish starting point and intervals for content analysis.
The quotient from stage 1 is divided again by 3 to arrive at the starting points. The answer is rounded off to the closest whole number to get the starting point and the intervals which will not be observed.
3. Time segments selected.
Observe sample time segments.
Observed segments
Interval segments

Figure 1. Sampling instructional videotaped content—A model for sampling time segments for content analysis of instructional material.

The rationale for observing the videotaped content in three distinct portions of beginning, middle and end was to secure a third of the actual lesson time for viewing in a way that represented different portions of the teaching transaction. The observation period for a 2½-hour class was the 17th minute to the 34th minute (rounded off from quotient of 16.66). The middle was from the 51st minute to the 68th minute, and the final portion was from the 85th minute to the 102nd minute. For 1¼-hour classes using the same sampling technique, the beginning point of observation was from the 9th minute, the middle from the 27th minute and the final portion from the 45th minute. For each faculty member teaching a 2½-hour session the total number of minutes observed was 459 minutes, and for the 1¼-hour sessions, the total was 243 minutes. This sampling technique is couched in Holsti's notion of flexibility and representativeness in sampling for content analysis. Holsti (1969) has posited that in the event that "every source is not considered equally important for the purpose of the study [that a] purposive sample may be drawn to reflect qualitative or quantitative aspects of the sources which are deemed important" (1969, p. 130). In addition, there are special characteristics for the beginning, middle, and ending portions of an educational transaction. In accordance with the research question the unit of analysis (that which is counted) was instructional delivery strategies used by faculty. The categories were adapted from Cranton & Weston's (1989) typology (Table 1) and formed the etic (analyst-constructed categories) during observation.

Table 1
Etic Categories for Coding Instructional Delivery Methods

Instructor-Centered	Interactive	Individualized	Experiential
Lecture - students passive	Class Discussion - student involvement	Programmed instruction- students receive extensive feedback; students work at own pace	Role-playing - active student participation
Questioning - encouraging student involvement; monitoring student learning	Discussion Groups - students participate in group work	Independent projects - students are actively involved assigned projects during class time	Simulation - active student participation in situational experiences during class time
Demonstration - instructor illustrates - uses examples, anecdotes, graphics	Group projects - students given assignments to be worked on in groups during class time	Computerized instruction - Instructor uses e-mail or other CAI methods of instruction	Laboratory - active student involvement in a realistic setting

Researcher as Instrument

We brought to the project some bias about what is expected in a distance education course taught via PictureTel and were the main instruments for data gathering and analysis. From a communication and teaching perspective, the feeling is that enthusiasm, personality, and a general knowledge of the medium one uses to disseminate information is essential to good teaching, regardless of the medium. From the literature and our own observations, we have learned that the majority of the instructors now teaching via distance education have come out of traditional teaching situations and have resisted major adaptations to accommodate the new medium. Because distance education is very different from the traditional classroom, it follows that there needs to be some readjustment on the part of the traditional instructor who wishes to teach via television. In this regard, we feel the distance education faculty, while expert in their content area, need to be trained for the new challenges of teaching via television.

Data Analysis Strategy

The instructional delivery methods practiced by faculty were identified and counted through observation of videotaped material of the televised instruction on PictureTel. A number of categories were named in the first round of coding. These data were identified, counted, and provisionally analyzed through interpretive analysis. In the second round of coding, we decided that the parameters for coding had to be expanded to include non-instructional strategies given the technical and administrative categories that were emerging. A further refining of categories was achieved by reviewing the samples againand, in one instance, reviewing the entire videotaped lesson. During this phase, verification of categories was the objective, and, where there was an overlapping of categories, these were either subsumed under a broader category or placed in a separate category.

Findings, Conclusions and Limitations

The majority of the instructional delivery methods practiced were instructor-centered and concentrated heavily on three major strategies: lecture, questioning, and demonstration (see Table 2). Guest speakers (3 instances observed) emerged as a category and were coded as an instructor-centered strategy. These were coded as such because the guest speakers only employed the lecture strategy interspersed with questions and demonstrations. Observed interactive strategies focused more on class discussion than on feedback or on group projects. There was no clear distinction that necessitated creating a category for discussion groups and another for group projects, as the activities almost always overlapped; therefore, these two strategies were collapsed into one category (group projects) which clearly described both functions.

Table 2.
Observed Instances and Examples of Instructional Delivery Strategies by Faculty (N=5) Teaching via PictureTel at Sunny University*

	Instructor-Centered			Interactive			Experiential	Individualized
Instructors	Lecture	Questioning	Demonstration	Class Discussion	Feedback	Group Projects	Role-play	Independent Projects
Sydney*	(7) Explanations; Talk on subject matter (2) Guest speaker	(5) Logistics Text, Instructor to student	(1) Video shown (1) Anecdote	(7) Reports, syllabus, and student to student	(0)	(2) Students talk about chapters in text	(0)	(3)
Francis*	(14) Subject matter	(13) Activities Verification	(10) Diagram video, overheads, illustrations	(1) Discussion on answers	(1)Instructor repeats information	(4) Cohort exercise, projects from Study Guide	(0)	(1)
Ashley*	(15)Defines, explainssubject matter (1) Guest speaker	(14) Student to instructor, Instructor to student	(7)Diagrams (1)Anecdote	(5) Term paper, technical terms	(1) Informs on term paper results	(0)	(0)	(0)
Toni*	(12) Subject matter	(16) Student to student, Instructor to student	(13) Graphics and captions (3) Anecdotes	(6) Lead-ins, question and answer	(0)	(0)	(5) work-related relationships	(1)
Jerry*	(16) Subject matter	(16) Instructor calls on students at remote site	(6)Writing on board, typed illustrations	(2) Student to instructor and instructor to students	(4) Repeats information, repeats questions	(0)	(0)	(0)

*Pseudonyms.

What has emerged at Sunny University is corroborated with what was found in the Dillon et al. (1991) study. Also instructive in the findings of this study was that one instructor who claimed no previous teaching experience used more non-lecture methods than the other four instructors who were seasoned traditional instructors. This would seem to bear out the notion that traditional teachers need to modify their teaching to fit the distance mode. However, one important point that should not be overlooked in the data for instructor-centered strategies is the volume of questioning which instructors at Sunny University did. These data may suggest a concerted effort on the part of instructors at Sunny University to depart somewhat from the straight lecture method and to move closer to teaching for the distance mode.

Readers are cautioned not to infer that interactivity was a high point in the instructional strategies practiced at Sunny University because there were 64 instances of questioning. Questioning, while generating two-way communication, was rarely directed at distance students and did not constitute feedback, which was rarely practiced and was regarded by proponents as integral to interactivity. In fact, the data from observations showed that except for a very deliberate attempt by one of the instructors of this study, most of the questions were directed to on-site students. This would indicate a clear violation of Holmberg's (1995) claim that interactivity in a non-contiguous communication process is being able to give effective feedback and help the distance students keep track of their progress. Holmberg's claim also seems to support Zigerell's notion that "non-interactive or one-way video encourages passivity in learners" (1991, p. 64).

The analysis of these data showed that while faculty practiced some of the emerging practices recommended by themselves and by proponents, that the actual application of these emerging practices was haphazard. For example, everyone lectured, but none of the instructors made use of Ostendorf's (1989), Zigerell's (1991), and Willis's (1993) recommendation not to lecture for more than 20 minutes at any given time during the distance education transaction. The instructors did introduce interactivity by asking the students if they had any questions, but the teaching time spent on lecture far outweighed the teaching time spent in interactivity between the instructor and the remote-site students.

Rationale for Emerging Practices in Use

The in-depth interviews with the instructors illuminated several areas related to the research questions. For example, it did not appear as if they had a choice in using PictureTel. From all accounts, the university was going to attempt distance teaching and instructors were asked to participate. As Ashley stated, "Well, first of all, I was asked to present this particular course or this segment of the course; it was a new course for me. Then I was also told that it would be presented via distance learning." Ashley was not, however, enamored with the technology at all: "The information, the content being presented, can be presented via any medium, and PictureTel is just another mechanism to present the information to another area—to a distant area".

Francis, while appearing very relaxed with the technology during the presentations, also appeared to have had to embrace distance education and the technology with no previous exposure: "cold turkey. . . .I literally started off that course with little or no preparation." None-the-less, the instructors defended the instructional strategies used. Toni used a more instructor-centered approach in distance teaching and justified it, saying the approach was used "because the students tend to look for more direction."

> They say the students at the distance sites tend to be more passive than students at host sites, and what I've experienced is if the instructor doesn't take an active role in building that student participation, they become lethargic and simply watch what's going on as opposed to becoming a part. So rather than giving more freedom to the student to guide the direction and to lead the discussion, those kinds of things, I think is not necessarily good in my classes. It may be appropriate in some other classes. There is a reason for that because my students tend to be more traditional students than non-traditional students. If they were non-traditional students, more mature, more self-directed, I think then the scenario might be different. (Toni, March 1997)

Sydney articulated that PictureTel was just one element. "The method by which I reach [the students] is fairly neutral." Sydney claimed, "My subject is not teaching through PictureTel. My subject is using technology to reach the learner and to teach something to the learner to give them valuable insight." Sydney believed that the students taking the course should be self-directed and, as such, the strategies employed were appropriate.

> My teaching method is based on student participation, discussion, case studies, and also it implies that you have to have more graphics when you teach, and this is not always what people do. So, I have to prepare

> graphics. I have to prepare slides that they will be using, and that I will be using to show them some of the things I want to tell them. So you have to be visual and auditive as well. You can't be only auditive. (Sydney, March 1997)

Jerry recognized that the intimacy of the traditional classroom was no longer available to the distance teacher and was compelled to adopt the strategies that would allow for ultimate control of this new classroom:

> I have the feeling that I need to use more graphics, more images, and I don't know why in distance learning do I need more images if they're really the same, you know, but it's just something that comes out from within me. I feel that it's the right thing to do, you know, probably. Now that I think about it, it's probably because I want to have, like, double safeguards. Before, I could just talk to a class and if something wasn't too intelligible to them, then it's very simple to just switch and do something else on the board. But since we have this tenuous connection already, I guess I don't want to mess up. I want to be doubly prepared. (Jerry, March 1997)

Jerry made no apology for not using a learner-centered approach in teaching via PictureTel. This instructor made reference to conducting several group discussions in a face-to-face situation but noted that the lack "of confidence in this equipment" would cause problems of control of the class from a distance. To Jerry, control was an important part of the teaching equation; Jerry affirmed, "I haven't used the learner-centered approach at all." The instructor took the justification further:

> Theoretically I could [use a learner-centered approach] but I'm worried about the control. You know, when you have this group of students up at the front and the others are sitting back there making faces and I can't see them. . . things get out of control at the [remote site]. (Jerry, March 1997)

Factors for Differences in Use of Emerging Practices

The data generated from observation of videotape and in-depth interviews revealed the following findings as major factors accounting for the differences in use of emerging practices: time constraints; subject matter; student type; experience; technology used; personality; competence with technology; philosophy of distance education; and adapting for distance education. With Francis there was a pacing problem; questions coming from the distance site indicated that students were concerned about the speed of delivery. As a matter of fact, Francis said there was a lot to be grasped in the courses: "[The courses] are laying out the framework, the basic knowledge-based concepts, theories, definitions, history, philosophy and so forth upon which the field is based." However, even with that thinking, the proponents of distance education have maintained that instructors teaching via television must pace both content and delivery to accommodate the separation factor in distance teaching. As Willis (1993) has said, "The pace should be slower for new material and faster for review. . . .Diversify and pace course activities and avoid long lecture" (p. 107).

Jerry wrote extensively on the chalkboard. The instructor insists that because of the subject matter, putting the matter on overhead projection would not be the same: Zigerell (1991) has suggested that the television screen might not be the best place for displaying material written on a chalkboard. "It [meaning the television] is not good, for example, for displaying illustrations and graphics that require wide eye span" (p. 64).

All five instructors had to prepare more for distance education classes than for their other classes and all believed that if the technology did not fail them so often, the experience would have been more worthwhile for everyone. As Jerry put it, "It's not distance learning; it's the equipment."

Conclusions

We concluded from the data that emerging standard practices (identified in the literature) were used minimally, and that traditional lecture was still dominant in distance teaching. Dillon, Hengst, and Zoller (1991) support these findings. In their study they found that two-thirds of the courses taught were instructor-centered strategies. A more recent study, (Cordover, 1996) while not examining instructional strategies of instructors, concluded that traditional instructors needed training to perform successfully in the distance education environment. Emerging concerns evolved from a large section of emic (that is units discovered rather than imposed) data. It can be concluded that faculty are genuinely concerned about enhancements to the technical system, and general improvements in distance education delivery at the institution. While expressing doubts about the "distance" factor in the program, they

recognized that PictureTel and the operation between the originating sites and other campuses within the same state was a small part of a larger goal for the institution.

Limitations

The researchers never anticipated that technical problems would be an important intervening variable in the distance education transaction. No accommodation in designing research questions for this study was geared to addressing how the effectiveness of the technology being used could play a role in the instructional delivery methods of the instructor. Although previous research has acknowledged that technical failures during the educational transaction are not uncommon, it would seem fair to conclude that if the occurrences are frequent, this would increase the transactional distance in distance education and result in negative experiences both by faculty and distance students. Faculty also appeared to create their own downtime in introducing administrative matters during their most captive audience time exceeding durations of ten minutes in some instances.

Although limited in scope, the data from this study can provide insights to faculty that are or intend to teach via the television medium. Further, while the results of this study should not be generalized beyond the population of the study, the findings and recommendations of this study give rise to new theory for greater understanding of the phenomenon studied. Prior research has indicated that training is essential for transitioning traditional instructors into the realm of distance instruction and the data from distance education faculty at Sunny University have validated this finding.

Recommendations for Practice and Research

Lecture is a good method, but in the distance education environment, the voice, the person and personality take on more meaning than in the traditional setting. The instructor has to essentially relinquish the old way of thinking and mentally prepare to be on television. Scripting takes on special significance geared toward talks of 10-15 minutes rather than lecturing for hours. A study guide appears to be the "Bible" of distance courses as it provides the distance students with something concrete containing the objectives, activities and expected outcomes of the course. Ongoing faculty development is critical, as the changes and advances in technology are rapid. Further research should be done to compare the effects of traditional techniques and distance education emerging practices on learning.

Note. From Planning Instruction for Adult Learners (p. 84), by P. Cranton and C. B. Weston, 1989, Toronto: Wall & Emerson, Inc. Copyright 1989 by Wall & Emerson. Adapted with permission.

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Critical Components of Distance Education Partnerships between Two-year Colleges and Business and Industry

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There is a lack of planning data that can be used by two-year college administrators and training program practitioners in developing, funding, and monitoring partnerships in distance education environments. The goals of this multiple case study were, (1) to identify critical characteristics of program planning, funding, evaluation, and policy development in distance education partnerships and (2) to create the framework for a program development model for the planning and refinement of distance education training programs.

Keywords: Distance education partnerships, Distance education policy, planning, & evaluation

The future role of continuing education programming provided by two-year technical and community colleges is filled with questions and speculation (Gross, 1995). Demographics and instructional technologies are changing and distance education will affect their future, but the extent of which is unknown. Two things are clear: (1) the need for continuing education, especially in business and industry, is greater with the current transition from an industrial to an information society than it has ever been in the past and (2) financial resources are scarce in higher education and are constantly being divided to cover the costs of more and more services (Gross, 1995).

For a number of two-year college systems across the nation, especially those in western states, answers have been found in the development of an aggressive distance education program (Western Interstate Commission for Higher Education, 1983). Distance education is not a new concept. In fact, distance learning is as old as correspondence education--an arrangement that has provided learning for thousands of students in many parts of the world. In the face of economic constraints, political pressures, and technological developments, interest has developed in formalizing arrangements between universities, colleges, and other agencies to become partners in distance education (Konrad & Small, 1986). To help defray costs associated with developing and maintaining technologically advanced distance education programs, several two-year institutions in the United States have developed partnerships or consortiums with other public institutions as well as private-sector partnerships. An added benefit has been the enhanced quality and quantity of the continuing education training programs they can offer.

The use of technology in training has grown tremendously over the past several years--tools have improved and produced several important changes in the way training has been designed and delivered (Haag, 1993). Although not every organization has implemented these new design and delivery systems, the number of organizations using them has increased significantly. A 1995 survey of organizations of more than 100 employees indicated that 48% were using computer-based training, 27% were using multimedia systems and 43% were using some type of distance learning system to deliver training (Industry Report, 1995).

The use of technology-based delivery systems in the training process has many potential benefits for organizations. For example, the use of computer-based technology in the design and delivery of training can result in greater learning gains, more consistent and acceptable job performance, enhanced cost-effectiveness and greater flexibility regarding time and locations of training (Hannum, 1990). Technology can also help address the needs of geographically dispersed trainees and reduce the need for classroom facilities (Perlstein, 1993). With the advent of globalization, more and more trainees are instructed through satellite delivery systems and computer-based software and training systems. Barriers are often present in organizations that inhibit the successful integration of distance learning technologies. These barriers may include high costs, lack of management support, lack of trainer skills, failure to adequately identify needs and to analyze financial benefits of distance learning (Gery, 1994). If two-year community and technical colleges are going to continue to be worthy training partners for globalized organizations in the next millenium, they must understand the barriers organizations face in integrating distance education programs. Furthermore, two-year community and technical colleges need to be able to provide proven planning and adoption models to help organizations overcome these barriers.

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Distance Education in Texas

In 1995, the 74th Texas Legislature passed "The Telecommunications Act" (House Bill 2128, 1995), and with it set aside $150 million in annual funding for telecommunications over a ten-year period. This money has been designated to fund grants and loans, with a priority given to distance education and the collaborative efforts of schools and universities (Texas Department of Information Resources, 1995). Another way the Texas state leadership demonstrated a commitment to distance education was through the development of a Distance Learning Master Plan for Higher Education (Texas Higher Education Coordinating Board, 1996a).

Higher education leaders in Texas also addressed the use of new technology as an integral part of the curriculum. The Texas Higher Education Coordinating Board's (1996b) *Guidelines for Instructional Programs in Workforce Education* made specific reference to advances in professional development and multimedia. Specifically, the Coordinating Board guidelines stated that, "All institutions shall demonstrate promotion of teaching excellence by implementing professional development activities for all part-time and full-time faculty." Such activities include "new technologies and curricular applications and the use of technology / multimedia / telecommunications in instruction" (p. 8).

As justification for the above guidelines, the Texas Higher Education Coordinating Board (1996a) had found that more institutions were participating in distance education than ever before. The Coordinating Board surveyed the state's 166 higher education institutions and found that, during the 1993-1994 school year, 50 of those institutions offered courses for credit via instructional telecommunications. They added that this trend was expected to continue and that the growth rate should accelerate. The Coordinating Board cited two primary reasons for its support of the pursuit of distance education: (a) to meet the needs of the under-served population and (b) to increase course offerings in disciplines designated as occupational shortage fields. Additionally, since Texas is geographically the second largest state in the United States, distance education systems are critical to transcend the geographic challenges, especially in the western half of the state.

While Texas would not be considered the leader in distance education programs, certain universities and two-year colleges have developed some rather sophisticated distance education programs. The most remarkable programs, in terms of breadth of programming and number of students served, are those in the three schools that were studied for this research.

The Texas Higher Education Coordinating Board's (1996b) *Guidelines for Instructional_Programs in Workforce Education* designates the two-year community and technical colleges as the primary providers of workforce development programs. It is a natural consequence that those same institutions take a leadership role in distance education partnerships with private business and industry. It was the intent of this study to identify, research and report specifically on those types of partnerships.

According to Hall (1996, p. 45), "distance educators [in electronic or virtual universities] need to forge new partnerships with the traditional university and collaborate in creating new systems, academic course software, and supporting networks for information transmission." In addition to these partnerships, distance educators need to forge partnerships with private-sector entities to ensure program vitality in the areas of effective communication processes, transmission systems, state-of-the-art technologies, and adaptive networks. These processes and systems are necessary to guide the development and delivery of courses and programs to meet the education and training needs of a global society.

Problem Statement

Substantial research has been done in the field of distance education that relates to developing, delivering, and evaluating individual courses as well as profiling distance education students (Willis, 1994, Gooler, D.D., Firestone, C. M., & Clark, C., 1992, Niemeyer, D., 1985). *There is, however, a lack of planning data that can be used by two-year college administrators and program practitioners in developing, funding, and monitoring partnerships in distance education environments.* The primary goals of this study were, (1) to identify critical characteristics of program planning, funding, evaluation, and policy development in distance education partnerships between public, two-year colleges and business and industry in Texas and (2) to create the framework for a program development model for the planning and refinement of distance education partnerships in two-year college continuing education training programs.

Research Questions

This study attempts to identify procedures and practices related to four critical components of any distance education program partnership (Eastmond, 1994), especially training partnerships between two-year colleges and private business. The following four components and questions of inquiry guided this study:

- Program planning: How was the need for this partnership determined? How were decision-making and planning committees formed? How was equal input sustained from all stakeholders?
- Program funding: How was the program initially funded? How is it currently funded? What plans have been made for future funding?
- Policy: Were policies in place to allow for distance learning activities? What were these policies and what changes were necessary to allow for the partnership? What new policies were developed and by which partners?
- Evaluation: What evaluation practices and tools have been developed to capture and reflect the benefit(s) of the partnership for each institution and its students?

Methods of the Study

The design of the study incorporated a multiple case study approach that included interviews, document reviews, and observations as the primary methods of data collection. The three cases selected for this multiple-case study were distance education partnerships between public two-year colleges in Texas and at least one private-sector business or industry. The following considerations guided the selection of each case:

1. The three programs selected represented a variety of two-year institutions and/or a variety of private-sector businesses or industries.
2. The programs selected represented a variety of student/learner populations and/or geographical demographics.
3. The partnership selected were a current practice at the time of investigation (programs in planning stages could be considered).
4. Curricular offerings of the partnerships were delivered via distance learning technologies that included: (1) two-way audio and/or video transmission utilizing microwave, fiber-optic, satellite transmissions, etc., (2) the Internet.

For each case, interviews were conducted with the program administrator from the two-year college, the training representative from each company, and at least one instructor from each program. Program planning documents, evaluation tools, contracts and policy statements were the primary documents reviewed in each study and the researcher observed planning meetings and/or actual training classes at each site. Upon completion of data collection activities, the data from each case was closely examined to identify emergent themes.

For this study, a process of coding and comparing information known as thematic analysis was utilized to achieve data convergence. "Thematic analysis is a process for encoding qualitative information. The encoding requires an explicit 'code'. This may be a list of themes; a complex model with themes, indicators, and qualifications that are causally related; or something in between these two forms" (Boyatzis, 1998, p. 4-6). To make results from qualitative research accessible to others, one must employ different ways of organizing and presenting them (Miles & Huberman, 1984). Thematic analysis allows the application or use of qualitative information in a manner facilitating communication with a broad audience (Boyatzis, 1998). This multiple case study utilized a process of thematic analysis for the purposes of coding data and identifying cross-case themes.

The cross-case analysis utilized the 'thematic code analysis' process (Boyatzis, 1998) which resulted in the identification of common themes in the areas of program planning, policy, funding, and evaluation in each of the three cases studied.

An audit was conducted at the conclusion of the cross-case analysis. The audit consisted of a review by an external reader of all data including interview tapes and transcripts, researcher's field notes, documentation of the theme and cross-case theme development process, and the written report of the research.

Conclusions

The two-year college movement has been filled with adversities as well as opportunities. Access and affordability are the hallmarks of two-year colleges' appeal to students, while flexibility and focus on practice, as opposed to research, are its appeal to business and industry's training needs. Successful colleges in the distance education arena will be those institutions that continue to nurture these current trademarks while continually working to integrate the advantages of a more flexible delivery format.

As with traditional programs in higher education, effective distance education programs include comprehensive program planning activities and program policies that monitor internal institutional activities as well as intrastate and interstate developments. Also, to continue to appeal to their business and industry partners, program administrators at two-year colleges will have to develop sophisticated comprehensive program evaluation tools and methods similar to those used in other private-sector training programs. These tools and methods are applied to measure the impact and quality of distance education based training programs.

High-tech communication equipment, the heart of most distance education course delivery, is being improved at an escalating pace. If two-year colleges cannot develop methods to integrate new developments, their corporate partners will be forced to seek out those institutions, public or private, that can offer state-of-the-art delivery technology.

Overall, program administrators in two-year colleges are facing the challenges of distance education everyday and very little literature exists to help them through the steps of program planning and development. The following emergent themes are intended to assist program personnel in decision making and planning tasks associated with distance education programming with business and industry.

Program Planning for Distance Education Partnerships

Distance educators need to forge internal partnerships with traditional programs to create new systems, academic course software, and supporting networks for information transmission (Hall, 1996). In addition to internal partnerships, distance educators need to forge partnerships with private-sector entities to ensure program vitality in the areas of effective communication and transmission systems, and state-of-the-art technology. External partnerships will also help ensure sufficient networks to guide the development and delivery of courses and programs to meet the education and training needs of a global society. In each of the three cases studied, the college administrators initiated the discussion of utilizing distance learning technologies. In case study three, initial training discussions began in the economic development department and were later referred to a distance learning program that was housed at a different campus. This reinforces the notion that effective internal communication and cooperation are critical components of distance education partnerships.

McGill & Johnstone (1994) identified seven considerations for successful cooperation in instances of local, community college-based partnerships. Five of those considerations were reoccurring themes in each of the cases of this study: needs assessment, support from top level officials, consideration of staffing and funding needs, and the inclusion, maintenance, and nurturing of all program members.

In one of the three cases studied, the Concerns Based Adoption Model or CBAM (Hall & Louchks, 1979) was used to introduce the idea of distance education to company representatives. While this is not the only means for introducing a new concept, the CBAM process includes the early involvement of all program stakeholders. This issue was a critical, and sometimes missing, component of each of the partnerships in this study.

While a great deal of the planning was done informally between partners, specific aspects of the planning needed formal documentation. Programming logistics in each case were recorded and distributed to stakeholders in each of the three cases. This not only ensured consistency in planning details and information sharing, it was a critical communication tool for accommodating unknown or last minute changes.

Overall, in each case the college was the partner with the background in distance learning and consequently was the partner that introduced and nurtured the company through the design and delivery process.

Program Policy

As noted by Dively (1987), higher education policies and regulations were adopted long before educational technology became a major issue. Some of these policies will not be affected by the growing use of technology. In many cases, the use of technology can be accommodated with minor changes in policy and procedure. With the exception of a minor change in the college registration policy at the school in case study one, no policy changes were necessary to accommodate distance learning partnerships in the two-year colleges included in this research

study. It should be noted that each of the three training programs were non-credit and were under the jurisdiction of continuing education. Traditionally, continuing education programs in institutions of higher education operate with a great deal more flexibility than those in regular credit programs.

Each of the three companies studied had training policies that allowed employees to participate in continuing education programs. The policies typically included time off from regular work assignments to participate in company required training and reimbursement for tuition and related expenses upon successful completion of each course. No company in this study could document changes in current training policies that had evolved from worker participation in a distance education training program.

Based on the partnerships studied in each of these case studies, one may assert that distance education programs will continue to be effective alternatives to meeting workforce training needs. However, meaningful telecommunications policies need to be developed at the local, state, and national levels. According to Gooler (1991, p. 15-17):

> Good telecommunications policies are those which make it possible and feasible for educators to take advantage of the instructional and administrative powers of telecommunications technologies while reducing the risks and costs associated with being involved. Good telecommunications policies make the telecommunications systems as flexible as possible so that teachers and learners can determine appropriate usage. Good telecommunications policies open avenues for more regional and national cooperation among educators and learners rather than impose boundaries to such cooperation. Good telecommunications policies promote equity in access and quality of product and services through telecommunications.

Program Funding

Distance education systems were assumed to be a panacea for relieving higher education of traditional constraints of time and space. However, distance education has suffered from different shortcomings and restraints that have made it difficult to operate (Hall, 1996). One problem is the increasing cost of quality distance learning technology. The economic requirements to purchase and maintain the delivery equipment are very different from conventional teaching. As technology improves and user demands become more sophisticated, the traditional structures of classrooms are no longer viable tools (Gaspar & Thompson, 1995). Also, without adequate avenues for initial and ongoing funding, many distance learning systems may fall victim to outdated technology and unreliable telephone and data-transmission services.

Program administrators in each of the three case studies expressed many of these same financial concerns and were well aware of the impact that outdated technology can have on distance education programming. While in each of the three cases the company was responsible for a majority of the financial costs, program administrators in case study one and two had already utilized external funding sources to purchase equipment and to cover some training costs.

The incentives for cooperation in distance education programs are many (Willis, 1994). These three cases indicate that there are and will continue to be many financial incentives for developing and nurturing distance education partnerships between two-year colleges and business and industry.

Program Evaluation

A majority of the tools used to evaluate distance education programs are strikingly similar to those used to evaluate traditional programs. Eastmond (1994) suggested choosing a qualitative evaluation strategy that included the instructional materials, the instruction, and the overall program. Each of the program administrators and business and industry representatives in these cases indicated that the evaluation instrument included a fourth area of inquiry: the quality of the delivery technology.

Kirkpatrick (1996) postulated that the evaluation process must include evaluation at the individual and systems level to include all stakeholders in the program. Program and training effectiveness must be evaluated for individual students as well as for overall return-on-investment for each partner. A system designed to allow for both formative and summative evaluation will allow for continuous improvement and program modification.

The three companies involved in this research had designed their training evaluation around Kirkpatrick's model of four levels of program evaluation. Each of the two-year colleges in this study used more general evaluation tools. This disparity between partners led to a rather lengthy process of refining evaluation instruments in order to provide the companies with evaluation results in a usable format. In one instance, two evaluation forms

were completed by program participants. This study indicated that program evaluation components and instruments need to be discussed and agreed upon by all partners prior to commencing with training activities. Given the prevalence of its utilization in the cases studied here. it may behoove two-year college program administrators to become comfortable discussing and designing evaluation instruments based on the Kirkpatrick model.

Summary

Data collected in each of the three cases indicated that ongoing communication in and among each of the partners is a critical component in distance education partnerships. Furthermore, inclusion of program stakeholders from each partnership in the planning and implementing of the program is a critical step in creating and maintaining successful partnerships.

Especially in case studies one and three, another critical component was the prior expertise of college administrators in utilizing distance learning technologies in the delivery of training programs and courses. This previous experience proved to not only be useful for internal marketing, but it also appeared to be useful in the external marketing of distance education as a viable delivery format for business and industry training programs. Finally, it was the feeling of many of the administrators, company representatives, and instructors interviewed in this research project that one of the major strengths was the partnership itself. Whether it is for the influence of previous experience, financial and other resources, or simply to keep college faculty and administrators in tune with the workforce development and training needs of the private sector, distance education partnerships need to be initiated and nurtured in two-year colleges.

Implications

Existing research suggests that distance education will continue to play a vital role in the delivery of workforce training and effective partnerships will be a major component of its success (Hall, 1996). This study explored critical components of distance education partnerships between two-year colleges and businesses and industries. Very little research has been conducted to assist program planners and administrators in the actual development of distance education programs. The results of this study present an organizational framework for distance education program planning that can be utilized by administrators and program planners.
The organizational framework that evolved from this study has potential utility. However, there are a variety of additional areas of inquiry that need further research. The program administrator in case study three articulated it best when he remarked:

> The account manager from our economic development department and I have been looking for a planning model to follow to put this type of training together. So far, we have not been able to find one anywhere.

While none of the partners in the cases studied during this research had to make significant policy changes, there is clearly a need for comprehensive policies in the realm of distance education. The challenge to federal and state policy makers, as well as program administrators in two-year colleges, is to continue to make distance education policy that will enable institutions to meet private-sector training needs and not force viable training programs to fall victim to unnecessary bureaucratic processes.

As stated earlier, a notable challenge is determining a funding method that can provide start-up monies as well as adequate funding for ongoing system enhancements and upgrades. The partnerships studied in this research provided evidence that there are federal, as well as state-level, revenue sources available in Texas to start programs. The challenge to legislators will be to keep these revenue streams funded to foster new programs as well as maintain existing programs. The success of training programs is measured in part by effective program evaluation tools. This study indicated that the integration of evaluation results is a critical factor in the ongoing success of distance education partnerships. While it may be unique to this study, each of the three companies used Kirkpatrick's Four Levels of Program Evaluation Model. None of the three colleges in this study used Kirkpatrick's model, which led to inconsistency when each partner attempted to make program changes that were based on evaluation results. To streamline the critical step of integrating evaluation results, a detailed discussion of program evaluation tools and methods should be conducted between partners during the initial stage of program planning.

Distance learning technology is a viable delivery method that can benefit from further research concerning distance education partnerships. In addition, further research is needed to refine this organizational framework so it can continue to serve as a useful planning tool.

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Collaborating in Public with the Opposition": A Study of the Complex Meaning of Learning in A Cross Boundary Work Group

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The primary purpose of this study was to determine the meaning of learning for participants while working in a cross boundary work group. This study presents evidence that great personal, professional and team member learning was foundational to the work experience and reciprocal to collective team and organizational learning. These findings propose use of cross boundary work groups as a process for facilitating learning integrated with and parallel to solving problems in the multi-organizational workplace.

Keywords: Learning, Work Groups, Cross Boundary

A challenge all organizations face is to achieve their goals in a rapidly changing business environment and at the same time maximize employee potential. As work organizations and the work they do becomes more complex and competitive the decisions and actions of individuals are within a work group context. Teams are the focal point of how organizations are engaging in learning tasks through strategic planning, process improvement, or developing and improving new services (Gray, 1989; Parker, 1990, Brooks; 1992, 1994). Problem solving in teams has gone beyond organizational walls to accommodate the nature of today's business problems. Staffs cross boundaries when they work as groups of individuals assigned either short or long term to solve a problem through collective discussion and inquiry (Watkins & Marsick, 1993). A cross boundary work group is the explicit heterogeneous, either/both in work roles or organizations, mix of adults engaged to participate in the above stated activity (Carkhuff, 1996). Given the nature of today's workplace wherein work often occurs cross organizationally there is a need to understand the potential for such cross boundary work groups as processes for facilitating real-time learning while solving organizational problems.

Problem Statement and Theoretical Framework

One of many workplace environments undergoing work reorganization is health care. This particular industry is in the process of redesign and upheaval due to the impact of managed care. The missing element in most health care delivery systems is a virtual lack of integration of these components (Tapscott, D. & Caston, A., 1993;Witt, Kieffer, Ford, Hadelman, & Lloyd, 1993)

The health care work environment is shifting from within institutional walls to working with the extended or integrated delivery system of care that spans across geographic regions and across organizational lines. This creates particular challenges from a human resource perspective for the preparation of staff and the possibility of utilizing this forum as a learning experience for personal, professional and organizational benefit. From particular studies in the literature regarding learning as a collective team activity there is focus on the adult learning process (Dechant, Marsick, & Kasl, 1993); notion of dialogue in collective team learning (Cicourel, 1990; Dixon, 1994); capture of reflective and communicative behavior (Purser, Pasmore &Tenkasi, 1992); distribution of formal power to individual team members and the collective team-learning outcome of productive useful new knowledge (Brooks, 1994); and a study of factors affecting group learning with a distinction between learning and task in relation to group purpose (Marsick & Kasl, 1997).

Due to the extensive literature regarding teams and learning I investigated scholarly critique to provide direction for study. Suggested areas for research was: (a) should be conducted to examine team learning within different contexts; (b) teams that reflect on, critique and develop strategies to change organizational structures and policies; (c) organizations that have the intention to change unproductive ways of organizing themselves for work in organizations, (Brooks, 1994) and (d) research needs to be carried out with groups in their natural context rather than artificially constructed groups in laboratories (Hackman, 1987; Goodman, Ravlin, & Schminke, 1990). This study addressed these research needs in the following way: (a) within the natural context of workgroup activity rather than artificial; (b) chose a cross boundary work group that was charged with improving the way in which care is delivered to a population of patients to maximize impact; and (c) examined a work group that developed new protocols.

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Theoretical Frame

Traditionally, workplace learning was thought to be basically instrumental or learning from one's own experience, which could lead to a repetition of mistakes (Argyris & Schön; 1974; Watkins & Marsick, 1993; Argyris, 1994; Brooks, 1994). Today the ways we make meaning of ideas, distribute privilege and power, are held accountable to validity testing through rational dialogue. Communicative or dialogic learning is explained as achieving coherence, a critique of relevant social norms, cultural codes and a critique of the assertion itself. As such, meaning is validated through critical discourse, and each item of relevant information becomes a building block of understanding (Mezirow, 1996).

I looked to the reflective learning theory literature to provide a foundation for the study. By definition the focus of reflection is not a purely internal thinking process, but also involves action. What gives reflection its' character and significance is thought-in-action immersed within a context. The process of reflection and critical reflection helps us to adjust the distortions in our beliefs, and our errors in problem solving (Schön, 1985, 1987; Mezirow, 1991, 1996).

Within a work group context, reflective learning becomes generative of new thinking as members challenge one another's thinking, reframe their perspectives, and build on integrated perspectives to construct new knowledge (Mezirow, 1991; Marsick, Dechant & Kasl, 1993). Learning through critical reflection provides a transformation of personal frames of reference, and can be described as a "holistic" blend including personal development, work related knowledge, and skills (Marsick, 1991, p. 24). Research tells us that reflection and action promote inquiry, that aspects of adult learning process such as framing, reframing, experimenting, crossing boundaries, and integrating perspectives are characteristic of the collective team learning process (Dechant, Marsick & Kasl, 1993; Brooks, 1994). The purpose of this study is to add to our understanding of a particular type of team learning environment, cross boundary work groups, to investigate the links between individual learning and collective team learning

Research Questions

The main question for the study was: What are the meanings for participants while working within a cross boundary work group? To guide the study I sought sub-questions as research indicators from the studies in current literature to see how the emerging data compares using an adult learning lens. These sub-questions were used in comparisons after the first interview during the observations and prior to second interview questions during the data collection and analysis procedures.

The sub-questions and their connection to the literature are: (1) How do the participants perceive their assumptions about learning affect collective work group learning? This question comes from the reflective learning theory base (Mezirow, 1991, 1996) in the form of open-mindedness, reflection to test and refer back to assumptions, interpret the unfamiliar relate to a meaning perspective, probing for assumptions, values, and beliefs. (2) How does the group share knowledge and ideas? Interactive team learning processes revolve around collective thinking and action. This question stems from the Team Learning Open Systems Model (Dechant, Marsick, & Kasl, 1993) in the form of framing/reframing perceptions, experimenting, crossing boundaries, and integrating perspectives. (3) How do differences in formal power distribution between individual work group participants affect the meaning for participants? Collective team learning process requires team members to carry out both active and reflective work, and communication is essential. This line of inquiry stems from Team-Learning Process Model (Brooks, 1994) looking at active and reflective work, leadership style, and power level.

Methodology

The qualitative, phenomenological method was selected as the appropriate methodology to support the investigation of meaning or how the participants interpreted and made sense out of their work group experience (Bogdan & Bilken, 1982; Denzin & Lincoln, 1994). The setting for this study was natural and the key instrument was the researcher. As the researcher I was concerned about the process of the group experience, of what this experience has become for the participants, and what has changed for them because of this cross boundary work group experience (Bogdan & Bilken, 1982).

Study Population

The particular cross boundary work group called the Diabetes Awareness Team, or DAT, was selected based on the criteria of an effective group (Goodman & Associates, 1986) and was comprised of a collection of eleven participants from four competing health systems and one business setting covering a geographic region of patient care. The participant mix ranged from four to over twenty-five years of work experience and included all members of the work group. Their roles were as follows: Diabetic Nurse Educators, Home Health Nurse, Pharmacist, Rehabilitation Specialist, Health Promotions Administrator, Business Executive, Community Health Workers, and a Staff Development Specialist. The participants included nine Caucasian members, one African American member and one Latino member. They were charged by their respective organizations to work together to improve the health status of the diabetic patient population assessed to be at risk within their particular geographic region of care (Smith, 1994). The health care organizations and the professionals had a history of turfism regarding caring for the diabetic patient to protect their respective market share. The goal of the DAT was to improve the diagnosis, reduce complications and cost of treatment for the patients with diabetes across the region through education, collaboration and partnering as organizations.

Data Collection and Analysis

The data collection was divided into two phases. Phase One included: a) pilot interview and subsequent refinement of the interview tool; b) the initial sixty minute interview regarding social-biographical information, past work group experiences, and a problem solving critical incident (Flanagan, 1954;Ericsson & Simon, 1980); five work group observations with field notes; and document analysis of all agendas, reports, and meeting minutes. I focused on gathering information from the participants utilizing the elite interviewing technique prior to their work group experience to investigate the meaning of their experiences regarding previous problem solving, past work group experiences and their assumptions about working in groups as well as the role of the facilitator and group members (Dexter, 1970; Maxwell, 1996) The problem solving critical incident exercise gave a snapshot of their past experience in learning. The main concept from each interviewee's critical problem solving incident was extracted from the data and verified through the member checking process. This data provided a foundation to understand the background of the DAT work group members, their assumption base and the meaning of past problem solving.

I attended all work group meetings over the six-month period and took field notes attending to recording observed behaviors on the activities and work of the individual members and the group as a whole. I related this to the initial interview information to validate information gathered, and to plan for clarification and additional questions based on the observations during the Phase two interview. The use of sub-questions was employed to provide an understanding of the data links to the literature utilizing the adult learning lens. I collected records, i.e., agendas, reports, meeting minutes, of the DAT work group to provide another data source to compare with the interview and group observation data. Data were analyzed from all Phase One data, using member checks and triangulation of data sources.

At the conclusion of the five work group sessions I conducted the Phase Two ninety-minute interview with all eleven participants, focusing on the work experience and problem solving in the DAT as experienced and told by the interviewees. In order to understand how they organized interpersonal and intrapersonal experience, real-life situations were elicited by having the interviewee respond to eleven index cards that listed a concept or idea involving learning while problem solving. The interviewees were asked to respond to these ideas and concepts as it applied to their work group experience. They were also encouraged to complete blank concept cards with any other concepts that were offered based on their work group experience. These reactions provided data to further explore the interviewee's underlying principle of meaning-coherence (Patton, 1990). Questions were asked to clarify observations and to draw out their stories.

All Phase One and Phase Two data were analyzed in light of the multiple data sources. Data analysis was a continuous process in that I analyzed data as I gathered it, adjusting and expanding the observation and interview strategy. I identified meaning units, coded the data, organized it in logical patterns identifying categories and constructed themes. I completed matrices to display relationships, and generate concepts for exploration. I verified authenticity of the data analysis through the triangulation and use of multiple sources (Lincoln and Guba, 1985), corroborated through member checks and peer review. I discovered patterns of belief as defined by the participants, and through thick, rich description provided a holistic picture of their experience in the DAT.

Results, Conclusions, and Limitations

The overarching theme from the participants whole work group experience was the essence of learning as a dynamic and complex system. The nature of learning as described by participants was a story based on their prior assumptions of what a work group should be, how learning had meaning for them, roles of the facilitator/leader, and member's own roles and responsibilities.

Major Themes

What was different for each of these members was the positions they held and the role that position played in their home organizations. I observed a unification of purpose in all work group meetings that transcended the competitive advantage or disadvantage. The membership valued expertise and freely networked with one another and provided insights into their home organizations, and shared knowledge and expertise. For example, the members shared with me that they regarded the experience, background, and knowledge that each member brought to the table regardless of their organizational representation, their job role with the organization and their source of expertise. This valuing of expertise was related to the perceived value to the impact of problem solving for the improvement of patient care for the regional population. The member's experiences of working together and learning while participating were integral and interwoven events, a dynamic system of inter-related parts that influenced each other.

Personal Learning

The notion of personal learning was fundamental to the experience of the DAT members. This learning included development from learner to educator in the group, growth through self-expression, self-discovery through the application of new knowledge gained in the group, growth in their willingness to link thinking and action to people and organizations, learning to change orientation from a loner to a collaborator, and shift in thinking from individual to organizational focus. For example, Peter related learning in the DAT as an opportunity to grow personally as he learned that problem solving requires collaboration," *I'm learning, I'm growing. And that's what this whole group is about* ".

Professional Learning

As members they all related to increasing their clinical and political expertise, acquired an "improved' view of themselves through the assumption of the role of "educator" in the group, experienced change through taking an active work role in the group and through the role of mentor. It was interesting that these shifts in role which was reciprocal to active work roles, and that all members expressed they learned greatly as professionals. For example, in the work group meetings there was sharing as well as a challenging of processes such as educational protocols for diabetics, new techniques for testing, new ways of evaluating program outcomes, and other technologies. All described learning through the sharing of expertise, decision-making processes of trial and error, and collaboration of ideas.

Learning as a Team Member

There was a pervasive feeling that the active and reflective work experience helped the participants learn as team members. The DAT meetings were sixty to ninety minutes in length in which the problem investigation process was noted throughout the meetings. I observed that Selena, Ellen, Willa, and Helen described "learning as a member of a team" through shared knowledge, the articulation of a clear goal, trial and error of coming to a solution, and by gaining an integrated view of the problem they were trying to solve. They expressed that having the diversity of membership provided a "rich place to learn", that this learning was constant throughout the course of the DAT meetings, and that they could apply it directly to their daily work in other groups.

Minor Themes

Learning: Shaped by the Interplay of Power

The power individual members brought to the group by virtue of their expert knowledge and life experience shaped the learning experience for themselves and others; and had influence on the outcome of the group work. As I observed the DAT members' actions and interactions in the work group meetings I saw patterns of fluctuating individual power levels, which was confirmed by the document analysis and member interviews. Despite their placement of themselves in various power statuses, the group perceived the power relating to knowledge as expertise in diabetes, whether as consumer or certified clinical expertise, was highly regarded. I observed many times that the power level of an individual member was directly related to the perceived value of their contribution to the work group goal. For example, Henny and Gloria remained at a lower power level until the last DAT meeting. Sally as facilitator reported the status of their active work for them instead of asking them to report to the group. During the last DAT meeting, Henny presented the flyers herself to the DAT because Sally did not know they were completed. The other DAT members immediately embraced the work they (even though Gloria was absent), had accomplished. Henny for the first time took an active role in the problem solving, and Sally was diminished to a medium power level for the entire meeting. Henny described this meeting as a pivotal point for her, she saw an *"opportunity to teach others"* regarding outreach to the urban citizens. Her experience in DAT shifted from the learner to the educator role, her power from low to medium level.

The notion of "virtual attendance" gave power to individual members, and collectively to smaller groups that worked together on active work. When absent the members used face-to-face interaction between meetings; technology and mail systems both inter-office mail between members in the same organization, electronic and voice mail between members of any organization; facsimile; telephone; and US Postal Service; to communicate, offer reports, and leverage influence to the group problem solving. I observed the power level of Ruth, Peter, Gloria, and Ellen move as more influential when these tools were used. In fact, the members were as "virtual members", never really absent due to their "virtual presence" at the meetings.

Centrality of Ethnicity in Learning

What DAT members learned was dependent on who they were, who they represented, and the culture that belonged to them. Minority members talked about identity that who you are as a person is reflective of your ethnic community. Henny explained her view of how her life experience was helpful to the DAT "I was looking at that as helping others that are sitting around the table as far as making them aware of what the minority needs are and what their concerns are. Something that they may not even be aware of." Gloria changed her perspective to find her way to a new understanding of how to deal with the indifference she thought she encountered:

> Just let me see what is there and make them understand the importance of them to help the Latino to make a difference in that committee. Not just for me as a person but for the committee because I know there is a great need to educate, to change their way of life.

Organizational Learning

Separate from the meanings but important to note, were the implications for organizational learning that occurred as a result of the outcome of the collective team learning. Learning from the cross boundary work group became translated into changes in the various organizations' thinking and ways of acting as seen by changes in policies, procedures and systems. An example of one change is as follows: Ellen described an increased communication between professionals, and organizations in the region. Not only did it change her organization's marketing within the region, but also impacted how the education patients received in her rehabilitation organization has changed due to her increased expertise from the work group experience.

Discussion

Learning through experience in the work group was very much a product of active and reflective work done within the context of the group, among and between the members. This study supports the idea of critical reflection and transformative learning as Mezirow (1991) and Brookfield (1991) propose. The DAT members were diverse but held similar assumptions regarding the role of a group member and the role of a group facilitator and as such were

comfortable performing in those roles. What was different about them was their level of expertise regarding the clinical and non-clinical issues; their beliefs about the relationship between the project event and the mission statement of the DAT; their specific and unique frames of reference and expectations about each other's organization, and the role that organization played in the care of the diabetic population. After working together for six months, the "culture" of the DAT supported sharing of differences such as members displayed open-mindedness through their general ability to listen to disparate points of view, be open-minded about issues, and work collaboratively on active work.

This study also uncovered data that support the four learning processes identified in the study of Dechant, Marsick and Kasl (1993). For example, the majority of the DAT members "framed" their work initially by separating the targeted diabetic population into project events by fiscal quarter instead of combining them. Those two separated groups were: (a) the Caucasian financially able population and (b) the at-risk urban African-American and Latino populations. This grouping occurred through selective planning, not by open announcement of intent. The minority members noticed this and challenged this approach during the six-month work group sessions. As the work group experimented and crossed boundaries dialogue led to reframing of direction to be in sync with the mission to target the under-served as well as the African-American and Latino at-risk populations forming a new mental construct.

Within the work group, there was significant growth in the individual's willingness to link thinking and action between members, which meant between organizations. That there was an integration of perspective was outstanding, as political pressure between competitors and competition between individuals as experts in the field of diabetes and differences between ethnic groups was apparent at the start. The unifying belief and value of concern for the patient helped to build trust and promote dialogue. Unlike the literature, this study provided an in-depth view of individual learning as well as insights regarding collective team learning and organizational learning. Individual learning was different for each member, but they all learned through the mechanisms of opportunity for growth, problem investigation, collaboration, and listening to other points of view.

Another concept different from the reviewed literature on team learning was the notion of "learner" and "educator". Members transitioned between being either the "learner" or the "educator" during specific meetings and between meetings. This shift always included an opportunity for learning and happened as a result of mentoring activities between members, during the learning processes, and connected to the active work role

What was different about what this study uncovered was that individual learning was multifaceted and reciprocal to collective team learning. Several work group members experienced significant transformative learning that changed their personal lives, their role as professionals and their contributions as team members. This study supports the notion that the learning in the cross boundary work group was insituated, or occurred during the work process, it impacted their view of life, their approach to current and future work, and the expertise they held as professionals.

Brooks' (1994) research described the distribution of formal power as a critical lever in the successful production of knowledge by teams. Her research addresses the concept that formal power assigned by organizations either supports or excludes employees from carrying out the reflective or active work of team learning. In clear contrast to Brooks, this study uncovered what happened to individual member's power inside the work group, and the affect on their learning. In this context there was a unique set of circumstances that provided movement within the three levels of low, medium, and high power for individual members, and the direct influence of their status from this level to the output of the team.

A concept uncovered in this study and missing in the literature on team learning is that of "virtual attendance." This phenomenon enabled an equalization of power between those present and those absent. The relationship of this power equalizer to individual learning and team learning was significant. It provided a mechanism for individuals to maintain their status in the work group and provided a way to continue active work despite being physically absent.

The team learning literature has a silent voice regarding the ethnicity of members and the relationship to learning within the team, and how that contributes to the collective team learning. The members that represented the minority ethnic groups in the cross boundary work group interpreted work and problem solving in this setting through the lens of ethnicity, and were indeed the "voice of their communities." Minority race members were treated in ways by the facilitator that were different, such as they had less of an active voice, and they interpreted the active work as members of a different racial background assessing the work group outcomes for impact to their respective ethnic community. Minority members attached the meaning of formality to the use of reports and agendas that signified superiority, separateness between minority and non-minority work group members.

The findings of this study are limited due to the nature of the methodology utilized, that is the naturalistic paradigm, in that the primary concern of the qualitative research is to discover meanings of certain phenomenon, and these meanings are context-bound.

Contributions to Research and Practice

This research generated new knowledge related to: (a) adult learning in cross boundary work groups; and (b) use of cross boundary work groups as processes for facilitating learning integrated with and parallel to solving problems in the workplace; and (c) relationship of formal power of the members to the active and reflective work of the group. This study may help to define these work groups as learning groups. The diverse nature of cross boundary work groups is important to the field of Human Resource Development because of the potential for reciprocal multi-organizational learning to take place.

Methodologically, learning while working in a cross boundary setting works, and is worth consideration as a learning tool in the workplace while solving inter-organizational problems. It may lead to increased organizational capacity, and the ability to adapt to the ever-changing environment surrounding health care. Individual members described a deep personal learning wherein transformation of ways of problem solving in groups was evident, meaning schemes were changed, assumptions were challenged, and personal theories about work group experience were altered.

Those responsible for organizational or service line planning need to be informed that there is the capacity for generative professional learning through shared expertise between disparate and competing work organizations utilizing the cross boundary work group approach to problem solving. Cross boundary work group opportunities need to be identified by administrators responsible to assign employees to inter-organizational work groups.

Cultural diversity training is important to enable practitioners to be skilled in understanding the relationship of ethnicity, or race, and culture in the work group environment. As facilitators they need to be consistently prepared to assist work group members with the reality of their changed perspectives, provide support to them as they re-enter their work role.

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Designing Dispute Management Systems

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Conflict is a growth industry in our neighborhoods, our communities, our workplaces, our government, and amongst ourselves. We live in times of intense change and change creates conditions ripe for conflict and dispute. While we can not eliminate either change nor the conflict that results, we can choose how we handle conflicts. The challenge is to design and implement management systems which can modify the forces of change productively. Properly designed dispute management systems offer maximal organizational assistance for the mutual benefit of all stakeholders.

Keywords: Conflictt, Dispute, Resolution

Perhaps it is a paradox that one of the few constants in organizational life is change. Peter Vaille (1989) has suggested that all organizations exist in an environment which could be typified as "whitewater". An environment in which both internal and external environment in which the firm (organization) operates changes continually. In a world of increasing competition for many business organization in which the nature of the business demands evolving its operating procedures, and even its organizational culture to address the changing environment; the result in many cases has been conflict both within the organization (inter-personal, intra-group, and inter-subsystem), externally (inter-organizational with suppliers and competitors) and with customers.

Operating in environments in which businesses are opened, closed, merged, bought-out, downsized, right-sized, and re-engineered; there is ample opportunity for conflict and disputes to arise within a business organization. Therefore, a key challenge to the management of any competitive organization is the question of how to deal with conflict in the workplace and between the business and its customers (both internal and external).

Society Needs to Shift Its View of How Disputes Are Resolved

Many people - including judges and lawyers - believe that there is a litigation explosion involving too many frivolous law suits or other legal actions which seem more appropriate to being handled outside of the courtroom. Litigation is widely seen as a poor way to determine the truth, that it harms relationships, it is too costly, and it takes too long (Umbreit, 1995).

Expand Dispute Resolution Options

Many courts are now actively referring cases to mediation either at the time of filing or doing the settlement phase. Dispute management professionals then have an opportunity to intervene to settlement the matters in conflict before the parties initiate a cycle of emotional states not unlike that grief counselors experience with their clients. This "resolution cycle" is also known (depending upon the discipline) as the trauma or grief cycle in which the participant(s) move through a series of emotional states: shock/denial; bargaining, guilt, fear, depression, anger, acceptance/resolution.

This resolution cycle works in groups, organizations and nations as well as individuals. However, the resolution cycle is present in every significant conflict or dispute, including those which appear intractable i.e. international border disputes) and those" settled" by the legal system. When groups, organizations, cultures, societies or nations are presented by threats arising from conflict that send them or present the possibility of sending them into exile into armed conflict; they attempt bargaining and experience guilt, fear, and anger. Finally when or lose, they go through acceptance and or resolution.

However, this resolution cycle does not just apply to severe emotional loss or conflict. The stress of changing jobs, or facing organizational downsizing or even obtaining a mutually agreeable divorce or an automobile accident can trigger the cycle. The resolution cycle is part of the normal human and organizational coping mechanism, and is a significant factor in the design of many alternative dispute management systems.

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Many organizations and organizational members when faced with environmental stress within the organization invariably go through the first parts of the resolution cycle (shock and denial); bargaining (with each other or other forces); guilt (collective or individual); anger and depression. They may go experience these steps in almost any order and may go through the steps more than once as events are played out. However, without the help of HRD professionals and appropriate intervention strategies, including an appropriate dispute management system, they may not be able to satisfactorily reach the last stage of acceptance/resolution - whether or they "win" or "lose" the conflict. Without resolution they have not come to an end of the dispute regardless of what has been the formal or informal settlement or how the other party (or parties) feel regarding closure or resolution. A cross-disciplinary approach that recognizes that this cycle is present can facilitate settlement. By being aware of the resolution cycle, those designing and administering a dispute resolution system can guide the parties through not only the formal structural issues but also the emotional issues as well.

Many courts now refer cases regarding divorce child custody, visitation rights, spousal support), community disputes, teacher-student conflicts, sexual discrimination/harassment in the workplace, and victim-offender (restorative justice) to alternative dispute resolution arenas. The courts have come to realize and value the need to allow the parties to not only reach a mutually agreement settlement but to progress the emotional resolution cycle as well. Further, some disputes have benefited from the early intervention of a neutral evaluator to assist the parties to focus on key issues early on in order to save time, money, emotional distress, and to contain the scope of the dispute.

Another way to reduce litigation is to resolve the disputes promptly in the institution or organization in which they arise. Dispute management professionals and systems can apply principles of dispute system design in schools, businesses, government agencies, and virtually every other type of organization. These dispute procedures can be designed to focus directly on satisfying the parties basic interests as well as they emotional needs without creating battles or will or major legal fights. Further, even as the disputes (or potential disputes() make their way through institutions and organizations, people can learn how to listen, how to express themselves respectfully, and how to solve problems cooperatively. Here then is an opportunity for HRD [professional to assist in the design, operation, management, and education of conflict management systems for the mutual benefit of all stakeholders: individuals, organizations, institutions, and society. nations

The Nature of Conflict and Dispute

While it is customary to refer to conflict management and dispute resolution as if they were the same thing, they are, in fact, different. Conflict is the result of a process that gives rise to a dispute. The dispute is the result of conflict. Ury (1988), Fisher (1991) and Umbrecht (1995) all suggest that conflict results from the perceived need for change in the status quo by one party and resistance to change or the need for the change by another (individually, as a group, as an organization, or even as a nation). They suggest that conflict has three pre-conditions that are necessary in order to conflict and therefore, for a dispute to arise: (1) an interdependent relationship must exist between the parties, (2) a perception by one or both parties that their goals (expected outcomes of their interactions) are dissimilar, and (3) a perception that one or both parties are preventing the other from achieving their desired outcomes and/or goal(s).

Fisher and Ury (1991) have classified disputes and conflicts into three broad headings; (1) rights-based, (2) interest-based, and (3) power-based. To this list, Umbreit adds disputes based on the psychological needs of the disputants (for example esteem and fairness issues).

POWER	RIGHTS	INTERESTS
Political	Legal	Substantive
Economic	Collective	Procedure
Moral	Individual	Psychological
Social	Ethical	Societal

Ury and Fisher (1991) suggest that conflict is neither good nor bad. It should be perceived, therefore, by an organization (and organizational members) as a fact of organizational life brought about by the nature of the changing and evolving environment (both internal and external) in which the organization operates. The result should be for the organization to deal in a positive manner with the forces for change which give rise to conflict within the organization and between the organization and its external environment.

Even if the organization fails to adopt a conflict management system, it still is faced with conflict. They can try to deny it, quash it, bury it, ignore it, or deal with it in a positive ad productive manner. Organizations which choose to ignore or deny the existence of conflict and pretend they are "one big happy family", perhaps, a dysfunctional family, but still a family (Cummings and Worley, 1993) overlook the results that unresolved conflict can have within the workplace and with customers and suppliers. In *Winning Through Accommodation* (1983) Evarts noted that unmet needs for conflict/dispute resolution can be manifested in several ways:

- Interpersonal disputes between employees, between employees and supervisors, between teams within the workplace, between divisions or subsystems within the firm, between the firm and its customers, and between the firm and its suppliers.
- These disputes, whether acknowledged or not, lead to litigation.
- They can lead to worker slowdowns, either intentionally or unintentionally.
- They can lead to sabotage either through destruction of vital work components or through more subtle methods such as withholding vital information, rumor generating, adverse publicity, complaints to regulators, efforts to subvert the operations of another division or team.
- Low morale amongst employees and line workers through top management. This in turn can lead to rapid turn-over and/or loss of productivity.

In short then, conflict is a natural occurrence of the changing environment in which organizations operate. By itself, change and the conflicts which may result which lead to disputes are of themselves, neither good nor bad. They just are a natural occurrence of the operations of the organization. The critical question is what the organization does to deal with conflicts and disputes.

Organizational Development Theory

Organizational development theory (OD) has been developed , in part. as a response to the needs for organizations to address the need for change within the organization (attitudes, structures, procedures, and culture,) in a planned manner consistent with the principles of the behavior sciences (Cummings and Worley, 1993). Beckhard (1977) and Harris (1977) define OD as the planned study of organizational structures and procedures in order to promote the growth and development of the organization in a manner which further the competitiveness, efficiency, and health of the organization. McLagan (1983) further suggests that OD has a principal purpose the need to systematically address issues regarding inter-personal and inter-group conflicts.

Clearly then, OD theory (and Human Resource Development theory, in general) offer tools which can be utilized to address issues of conflict with an organization. Especially noteworthy are the contributions of Lewin regarding organizational change theory, Beckhardt regarding open systems theory, Argyris regarding the role of the intervener in designing and managing organizational change, Emery and Trist (1973) regarding socio-technical systems approach to OD, and Senge (amongst others) regarding the creation of a learning organization.

Taken together, OD theory has evolved from simply a theoretical approach to organizational change and change management (including conflict management) to one in which theory is applied to practice (and vis versa). This idea of applying theory to practice and practice in the formation of additional theory, is referred to my some as Action Learning and is fundamental to Senge's proposal for a creating learning organizations. Further, action research has given rise to a model for OD planning and intervention which is useful for the design of conflict management and dispute management systems.

The model has seven critical elements:

1. Entry and Discovery
2. Research and Data Gathering
3. Action Planning
4. Implementation

5. Evaluation
6. Dissimilation
7. Exit

During the entry and discovery phase the consultant would meet with top management and determine their perceptions of the problems and issues facing the organizations. What do they regard as the problems and the causes of the problems? Agreement also must be reached as to an action plan for investigation of the organization (research and data gathering, plan development, plan implementation and evaluation and dissimilation) and a commitment to implementing the action plan once it was developed.

The second phase is the research and information gathering phase. It is common for the views and experiences of top management to be both accurate and inaccurate regarding the extent and nature of conflict issues within the workplace. That is, they may be focused on the results of conflict and disputes a as the problem rather than the result of deeper more structural, cultural, procedural, or environmental problems. Further, they may or may not realize that top management and management policies are the cause or the result of the conflict (they may be in denial or unaware). Therefore it is necessary and appropriate to engage in research and data gathering activity to determine, objectively, the nature of the conflicts, their causes, their extent, and their affects on the operations of the organization.

The third phase, the action planning phase, requires the gathering of relevant information from throughout the organizations regarding proposed solutions to the conflicts. Since it is the stated goal of the organization to not just address the conflicts and disputes but to also design an on-going system to handle conflicts in the future; the focus of the action planning phase is aimed at this wider objective and will involve input from throughout the organization.

This action planning phase serves to highlight the advantages of an OD approach to the design of conflict management systems since OD practitioners place a high value on humanist approaches to problem solving, organization-wide involvement, participation and support from top management, voluntary participation in the data gathering/discovery and action planning phase, and confidentiality for all participants. It is an inclusive rather than exclusive process involving all segments and operation of the organization and not just top management. It involves a review of the structure, attitudes, operations, policies, culture, and environment (internal and external) of the organizations. It will involve customers of the firm, again, both internal and external.

This action planning phase also highlights the fundamental principle of OD in which an organization typically falls within a spectrum ranging from open to closed. Beckhard (1977) noted that many organizations (open) are very aware of the environment in which they operate and seek input from the environment in determining operational policies and in designing and redesigning (adjusting) such policies as the environment changes, is changed, or evolves. Open system organizations are also well aware of the interrelationships between subsystems within the organization (accounting, marketing, human resources, customer relations, production, legal, etc.). They are also aware that many individuals, teams, groups or subsystems over-lap or are trans-organizational and interactive. Gaining input and support from across and throughout the organization then is recognized as crucial for the smooth and appropriate operation of the organization. They recognize that conflict as a process, and disputes as a result of process, can be minimized by remaining open to multiple sources of information within the organization.

Closed Systems, on the other hand, do not seek input from the environment and make decisions internally (typically top management) without concern for the environment (internal and external) in which the organization operates. These organizations also may demonstrate a "warrior" mentality in which the organizational, group, individuals, and subsystem conflicts are largely ignored or are confronted and settled through resorting to power, authority, rules, regulations, law (including litigation) and prevailing, historic organizational practices. They also may choose to ignore or deny conflict either through eliminating the conflict (firing an employee, for example) or simply issuing a management mandate.

An alternative approach to the "fight" response organization, is the "flight" response organization. Here, they too ignore the systemic aspects of conflict (and the need for a viable conflict management system within the organization) by compartmentalizing conflict. Conflicts and disputes are classified by managers and then shipped off for resolution to accounting, customer relations, production (or quality control), the legal department, human resources/personnel, or the union/collective bargaining agreement.

Key Features of a Conflict Management System

As indicated above, by using an OD and Open Systems approach through action research, a more comprehensive and long-term approach to conflict management can be developed. Fisher (1991), Ury (1988, 1991), Umbrecht (1995), Carver (1994), Costantino (1996), Cummings (1977) and others have identified several key elements in designing conflict management systems and in their operation. The first element is a recognition of the need for a hierarchy of alternatives to address conflict and disputes within the organization. These alternatives are arranged from low-cost/low-risk to high-cost/high risk. This hierarchy mirrors a continuum from highly informal to highly structured. The second element, is a system which would allow disputants to move up the hierarchy as the need arises to address some or all of the issues in disputes (rights, power, interests, and psychological needs). Also, they have the right or opportunity to move down the hierarchy ("loop-back").

It is also critical to have a system which acknowledges that prevention of conflict and dispute is preferable to having to manage conflict. This would involve the development of alternative dispute resolution training at the individual worker level (interpersonal disputes), group level (inter-group disputes) and between management and employees. Included in this is training to all parties in communications skills, stress reduction, and marketing of the conflict management system within the organization.

Should a dispute arise, the first option would be to a negotiation level between the parties allowing them to achieve work-out agreement amongst themselves. Failing this, the second step would be for a facilitated method of dispute resolution with an outside expert (that is outside to the dispute), but the resolution still rests with the disputants. Third step might be to a fact-finding level at which the third party (a neutral to the dispute again) would engage in a discovery of relevant facts and issues. The settlement of the dispute would still rest with the disputants, but the fact-finder might offer an option regarding the likely outcome if the dispute moved to the next higher level. That higher level would be mediation. Here again a third party would work with the disputants to reach a satisfactory solution, again acceptance of the resolution rests with the disputants. Finally, the dispute would become the subject of arbitration in which the third party made a formal ruling or determination regarding a proposed solution. This finding may or may not be binding on the parties, but it would offer them an opportunity (as in mediation) to consider input from an objective, outsider to the dispute. Frequently in the case of both mediation and arbitration this third party can render expert judgement on the dispute and the likelihood of resolve at the last level, litigation.

As part of the design and education process, the consultant would promote the design of a system (including education, marketing negotiation, mediation, fact-finding, and arbitration) which emphasized several key elements in conflict/dispute resolution efforts. These elements as reflected in the philosophy, experience, research and practice of, amongst others, Ury, Fisher, Umbrecht, Consentino, all emphasis certain common characteristics:

1. Focus on the issues in dispute not personalities, not authority, not positions or power;
2. Keep the focus on the interests of the parties not the people;
3. Use objective criteria in assessing and describing the conflict and proposed solutions;
4. Remain solution focused but also allow for the venting of emotions;
5. Allow for the disputants to either retreat to alternative (low-risk lost cost alternative) or to simply terminate the discussion recognizing that the may see a better alternative to a negotiate settlements as being in their best interest;
6. Design a system in which the disputants have access to advise (consultation) before and during the process of resolution and to feedback after regarding both their assessment of satisfaction with the settlement and its implementation.

Based upon input from throughout the organization regarding the need for a conflict management system (which has an education, training and marketing component) and recognizing and reflecting the key elements for the design and operation of conflict management systems above; an action plan can be developed and preliminarily implemented. Based upon feedback from throughout the organization regarding their satisfaction and their experience with the system, an evaluation can be made of where changes are necessary and appropriate or where additional training in dispute resolution or marketing of the system is necessary.

Once the system has been found acceptable to members and groups (stakeholder) throughout the organization and perhaps others (suppliers, external customers, regulators, etc), then the conflict management system can be implemented (disseminated) throughout the organization and institutionalized.

At this point, the consultant may exit the organization and the organization can operate the system, bearing

in mind that they may have to modify the system over time as the needs of the organization change. Further, a continuing needs exists for training in dispute and conflict management strategies, communication skills, group interaction skills, and for marketing the conflict management system in order to prevent minor disputes escalating into major disputes (interpersonal, inter-group, intra-organizational, or systemic).

The Conflict Management Spectrum

Unassisted Problem Solving	**Assistance by Neutrals**	**Advisory Assistance**	**Third-Party Decisions**	**Litigation**
Avoidance	Facilitated Negotiations	Early Neutral Evaluation	Binding Arbitration	Lower Courts
Day-To Day Discussion and Interaction	Consensus Building Through Informal Mediation	Fact Finding	Administrative Boards and Commissions	State Courts and Appellate Courts
Normal Business Meetings and Encounters	Formal Mediation	Nonbinding Arbitration	Court Ordered Special Studies or Masters	Administrative Law Judge
Informal and Formal Business Information Exchanges	Court Appointed or Ordered Alternative Dispute Programs	Dispute Resolution Boards	Binding Court Ordered Settlement	Federal Courts
Problem Solving Sessions	Settlement Conferences	Summary Court Judgement (By Judge or Jury)	Mediation and then Arbitration	Supreme Court
Partnering (may involve facilitator)	Team Building			

Conclusion

Organizational conflict must not necessarily be reduced, eliminated, or avoided, but managed to reduce its dysfunctional outcomes and enhance its functional outcomes for all stakeholders involved. The management of interpersonal or organizational conflict involves the proper diagnosis and the intervention strategy into the conflict. A comprehensive diagnosis involves the assessment of the nature of the conflict, the source of the conflict, the depth and stage within the emotional resolution cycle, and the extent to which the conflict involves individuals, groups, the organization or inter-organizational conflict. The analysis of intervention strategy involves an appropriate assessment of how to intervene and when to intervention. This intervention strategy must include the establishment of a dialogue between the intervener and all of the parties to the dispute.

However, just as water is ever present in our physical environment, conflict and the potential for conflict arising from change forces upon organizations can lead to disputes. Further, just as water in the right proportion can be a stimulant for growth, conflict can also be a positive growth force for organizations. However, to much water or too much uncontrolled conflict can prove destructive. Systems exist to deal with high levels of water, systems can also exist to deal with change, conflict and disputes,. It is imperative that organizations design and operate appropriate conflict management/dispute resolution systems if they are to channel the forces for change in response to environmental and systemic needs in order to stimulate the growth of the organization. Left unchecked water is a destructive force of nature, unfortunately, left unmanaged, conflict in the workplace can also be destructive, and like natural disasters, lives have been lost due to unchecked conflict. OD and HRD can offer organizations tools and techniques appropriate to dealing with change and change management.

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The skills and knowledge of OD practitioners can be utilized to develop appropriate conflict management systems. Through the use of an appropriate action research planning model and an open systems approach to business operations utilizing the fundamental principles for the design and operation of conflict management systems, a suitable system can be developed for a workplace situation. It is not necessary quick, easy, or even painless for some businesses to do so as flaws in the organizations structure, policies, cultural, artifacts and history may be revealed. But the resulting system for managing conflict will serve the organization well in the long term.

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Application and Test of a Model of Team Effectiveness to Self-Managing Interdisciplinary Psychiatric Treatment Teams

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This study tested a causal model of self-managing team performance in the context of interdisciplinary psychiatric treatment teams. The findings showed 1) team design factors, indicated by level of task clarity, shared team mission, and leadership support, positively influenced work process; 2) interpersonal process factors did not influence work process; 3) work process was a significant predictor of team performance. The general pattern of relationships supported the hypothesized model.

Keywords: Teams, Team Models, Teamwork Process

Interest in and use of self-managing teams in organizations has increased dramatically. In 1987, 28% of the Fortune 1000 companies reported using self-managing work teams (SMTs) with some employees. By 1990, that number had grown to 47% (Cohen, Ledford, & Sprietzer, 1996). Organizations are increasingly turning to SMTs because they often offer a competitive advantage. Evidence indicates SMTs can enhance productivity (Guzzo, Jette, & Katzell, 1989), contribute to cost savings (Wall, Kemp, Jackson, & Clegg, 1986), and increase employee satisfaction (Cohen & Ledford, 1994). Case studies have shown employees working on SMTs produce more than those organized in more traditional, hierarchical structures (Hackman, 1990). Such teams are effective decision-makers because those who are closest to the work make the decisions (Ray & Bronstein, 1995) and are capable of high levels of innovation and creativity. Because SMTs handle a large degree of their own management responsibilities, fewer first-line supervisors are needed, and they are able to complete as much or more work at a lower cost (Yeatts & Hyten, 1998).

SMTs are groups of interdependent employees that operate in an organizational context who are responsible for managing and performing tasks that deliver a product or service (Yeatts & Hyten, 1998). Key characteristics include (1) task interdependency; (2) responsibility for product or service delivery; and (3) decision-making authority over task objectives, work assignments, work methods, and task scheduling and monitoring (Goodman, Devadas, & Hughson, 1988). SMTs are best distinguished from work groups and task or project teams by their high levels of interdependence and accountability in addition to their typically long-term purpose (Yeatts & Hyten, 1998).

SMTs have a long tradition in health care organizations. In this context, SMTs (1) provide a structure that helps guarantee a coordinated, 'whole client' treatment approach; (2) enhance interdisciplinary communication in the face of increasing professional specialization; (3) are often required as a response to legislative mandates aimed at improving the quality of patient care (Ducanis & Golan, 1979); and (4) help insure more continuity in service provision in high burnout, high turnover fields such as community mental health (Bond, Pensec, Dietzen, McCafferty, Giemza, & Sipple, 1991).

Models of Team Effectiveness

Models of team and work group effectiveness have proliferated in recent years. Most of these models have been designed for application to work groups in general, not to SMTs specifically. For example, Tannenbaum, Salas and colleagues have produced two models of team performance both addressing teams and work groups in general (Salas, Dickinson, Converse, & Tannenbaum, 1992; Tannenbaum, Beard, & Salas, 1992). Campion, Medsker, and Higgs (1993) developed taxonomy of characteristics or 'themes' that are related to the effectiveness of work groups in general. Hackman's (1990) model of work teams in organizations broadly defines its' domain as 'real' groups operating in organizational contexts with one or more tasks to perform. Although this model has been applied to SMTs (Vinokur-Kaplan, 1995), it is clear that SMTs are not its exclusive focus. In general, these and other models have not clearly specified the types of teams to which they are most applicable. Although research with these models has been able to explain significant variance, much remains unexplained. This may partially clarify why work group research has been able to provide an extensive list of variables that may be related to effective performance but has yet to reach agreement about what is truly important (Hyatt & Ruddy, 1997). There also appears to be a growing consensus that team tasks play an integral role in determining what is needed for effective performance (Bettenhausen, 1991; Hackman, 1990). The nature of team tasks is important because it determines how effectiveness is defined, determines the criteria of effectiveness, and influences which characteristics of team are most important in explaining their effectiveness. Given that different kinds of teams with different goals, tasks, and

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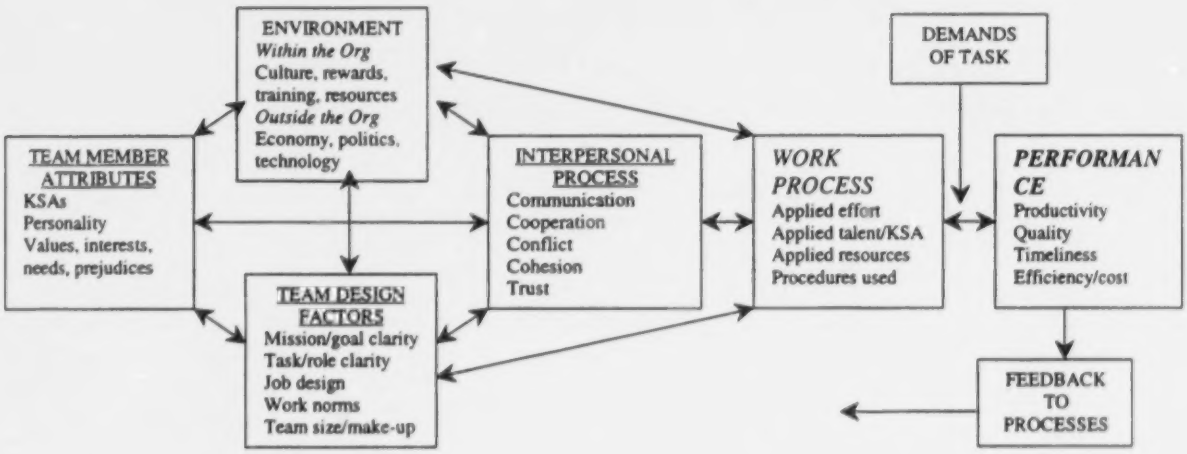
dynamics may behave differently, it is reasonable to expect that models of team effectiveness focusing more specifically on SMTs will have better explanatory power than those which address teams and work groups in general.

Yeatts and Hyten (1998) synthesized the research and conceptual work done with other models of team effectiveness to produce a model applicable to SMTs. Although the model was initially tested using a multicase, multimethod replication design (Yin, 1989), further research is needed to confirm the causal paths suggested and to establish the generalizability of the model to different settings. The model is shown in Figure 1.

Figure 1
Factors Affecting Self-Managed Work Team Performance (Yeatts & Hyten, 1998)



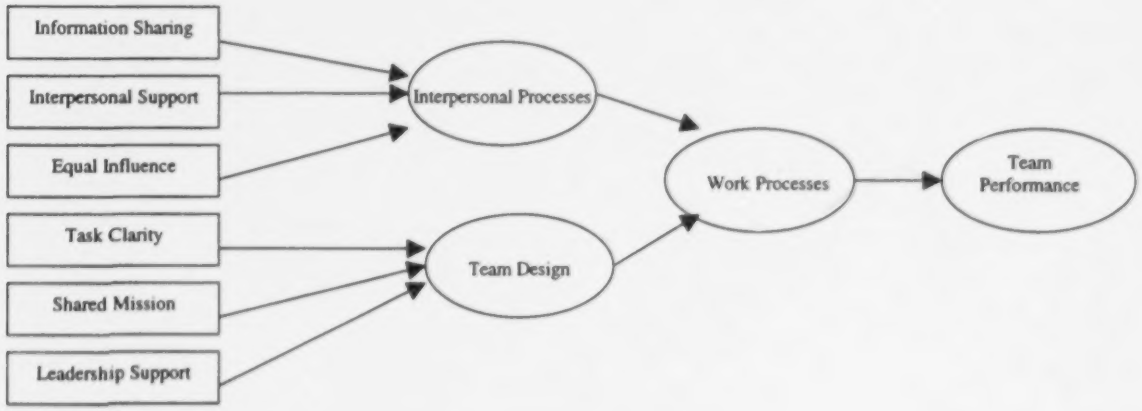
Like other models of SMT performance, the Yeatts-Hyten model is an input-process-output model that suggests a number of components or categories of variables can influence SMT effectiveness. Many of the components found in the Yeatts-Hyten model, such as environmental factors, team member characteristics, team design factors, and interpersonal processes, are also found in other models of SMT performance. Perhaps the major advance offered by the Yeatts-Hyten model over other models is the inclusion of work process factors as intervening variables between environment elements, team member characteristics, team design factors, and interpersonal processes and team performance. Work process factors refer to " the factors that are applied directly on doing the [team's] work, the procedures used for doing the work, the talent applied to the work (knowledge, skill, and ability), and the resources used to accomplish the work" (Yeatts & Hyten, 1998, p. 57). This set of factors represents the critical enablers of team performance in the sense that it here that a team's work is done. Most previous theoretical models of team performance have not included such intervening variables. Rather, they have tended to portray variables like interpersonal processes as having direct effects on performance outcomes. This conceptualization suggests that a team's ability to resolve conflict would directly influence key outcomes. Research by Yeatts and Hyten (1998) suggests such factors may enhance or diminish work process factors but do not directly influence outcomes. For example, given the desire for high quality treatment plans, a key performance outcome of psychiatric treatment teams, a team's poorly developed conflict resolution skills is seen as disrupting the work processes needed to formulate high quality, effective plans.

The purpose of this study is to test a portion of the Yeatts-Hyten (1998) model using structural equation modeling, with a specific interest in the role of work process factors as intervening variables. Specifically, this study examines the relationships between interpersonal processes, team design, work processes, and performance. Interdisciplinary psychiatric treatment teams are the focus of this study. These teams have a multidisciplinary membership that typically includes psychiatrists, psychologists, social workers, recreational or occupational therapists, nurses, and psychiatric aides. The teams are responsible for developing and implementing individualized treatment plans for patients with mental and emotional disorders. They exercise full authority over all aspects of patient care. Consequently, the team members have a need to communicate about patient status, diagnosis, and

progress with regard to short and long-term goals, treatment, and length of stay/discharge status. In short, psychiatric treatment teams are highly task and outcome dependent to the extent they must work together closely to perform effectively.

The model and variables tested are shown in Figure 2. The model shows that information sharing, cohesiveness, and equality of influence are indicators of interpersonal processes. Task clarity, shared mission, and leadership support were conceptualized as indicators of team design. Both interpersonal processes and team design are seen as influencing work process, which, in turn, affects team performance.

Figure 2
Hypothesized Model of Team Effectiveness



Concepts and Hypotheses to be Tested

A number of team design characteristics have important implications for SMT performance. Several authors (Hackman, 1987) have recognized that team effectiveness can be influenced by the degree to which team members understand their roles and tasks and the coordination of these for one common overall purpose or mission. Task and mission clarity can improve SMT effectiveness by improving the team's work structure, reducing role ambiguity, or improving coordination and communication (Tannenbaum, Beard, & Salas, 1992). The support team members receive from team leaders is also considered an important factor in team performance (Campion et al., 1993; Hackman, 1987). Team leader support can influence the stability of the team, the design of the work, the goals of the team, the availability of resources to the team, all of which can influence work process (Yeatts & Hyten, 1998).

Hypothesis 1: Team design characteristics will be positively associated with work process.

The ability of teams to optimize interpersonal processes has been identified by a number of authors as highly critical for SMT performance (Cohen et al., 1996;Tannenbaum et al., 1992). Work in SMTs requires that team members be capable of effectively sharing information, providing interpersonal support, and contributing to productive team decision-making and problem solving (Stevens & Campion, 1994). These core capabilities are believed to permeate all aspects of team functioning. For example, they influence team stability, the ability of the team leader to support team functioning, and the ability of the team to manage its own leadership. Yeatts and Hyten (1998) suggest its most profound influence on team performance may occur through the team's work process: the efforts, talents, and resources, and procedures applied to the team's work.

Hypothesis 2: Interpersonal processes will be positively associated with work process factors.

Yeatts and Hyten (1998) theorize that environmental, team design, and interpersonal factors moderate work process factors. They further suggest that work process factors (effort, talent, resources, and procedures) are important to team functioning regardless of task, although the demands of the task may moderate the amount of a work process factor needed to for effective performance. In the context of psychiatric treatment teams, the present

research tests the influence of work process on the ability of psychiatric treatment teams to develop high quality, effective treatment plans.

Hypothesis 3: Work process factors will be positively associated with team performance.

Method

Subjects

One hundred forty two mental health professionals representing 25 interdisciplinary treatment teams operating in three branches of a state mental health hospital were sampled for this study. Two teams (14 respondents) worked in a short-term care facility preparing short-term treatment plans for new admissions, stabilizing them, discharging them quickly or transferring them to a long-term care unit. Seven teams (44 respondents) were from a long-term care unit where they prepared, implemented and revised treatment plans for patients requiring long periods of care. Twelve teams (84 respondents) were from a forensic unit that prepared, implemented and revised treatment plans for patients with criminal histories who required long-term care. In all, the respondents were divided among nurses (13.8%), correctional guard/therapists (10%), psychiatric aides (19.2%), psychologists (10.7%), recreational or occupational therapists (18.4%), social workers (21.5%), and psychiatrists (6.1%).

Procedure

Data was gathered from members of interdisciplinary psychiatric treatment teams using a questionnaire instrument developed by the researcher. A number of discipline-specific focus groups were held with members of the teams under study. The majority of questionnaires were administered and collected during focus groups held with team members. A smaller number were delivered to specific units where a senior hospital administrator distributed them during regularly scheduled team meetings. In this case, completed questionnaires were placed by respondents in sealed envelopes and returned to the researcher by mail. These data were collected as part of a larger needs assessment project done for the Department of Health and Hospitals and other state governmental agencies in late 1997.

Measures

A questionnaire instrument was developed to operationalize a number of variables from a model of SMT performance proposed by Yeatts and Hyten (1998). Variables were selected based on their fit with the model, a review of team-related research, and their relevance for this context.

Eight measures were constructed for the present study: information sharing, interpersonal support, equality of influence, task clarity, shared mission, leadership support, work process, and team performance. All constructs were assessed using multi-item measures. The response choice for all items was a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly disagree). Scale scores were calculated by averaging the ratings for all items in a construct. For all measures, higher scale scores indicated greater presence of the construct being assessed. Each measure is described below.

Information sharing.

Information sharing was measured by three items that assessed team member perceptions of the degree to which individuals are able to discuss and share information (e.g., "Team members do not discuss some important problems because the other professional disciplines would not fully understand them").

Interpersonal support.

Interpersonal support was measured by four Likert-type items that assessed the degree to which individuals believed team members supported one another, influenced each other in positive ways, and desired to continue to work together as a team (e.g., "We influence each other in a positive way").

Equality of influence.

A three-item measure assessed the degree to which team members believed they have equal ability to influence team decisions and actions (e.g., "Each member of the team has as much influence on team decisions as any other member").

Task clarity.

Task clarity was assessed using a three-item scale that measured the extent to which team has established clear task and procedural expectations of individual team members (e.g., "Our task assignments are clear").

Shared Mission

Three items measured the degree to which team members have established and share a common mission in terms of the services they provide (e.g., "We share a common mission or purpose").

LeadershipSupport

Leadership support was measured by three items that assessed the extent to which team members communicated with and received support and feedback from the team leader (e.g., "We receive honest feedback from our team leader").

Work Process

Work process refers to factors that are applied directly to accomplishing the team's work, and can include four dimensions: effort, talent, ability or KSAs applied to the work, the resources used to accomplish the work, and procedures used for doing the work (Yeatts & Hyten, 1998). One of the most important factors affecting team performance is level of existing ability: when teams don't have the appropriate talent or ability or are not able to apply the skills they have, their performance will suffer. The present study focuses on the talent/ability element, conceptualizes work process as a treatment team's ability to successfully manage team processes in the development and implementation of treatment plans, and measures the construct with four Likert-type items (e.g., "One of our strengths is the ability to plan and coordinate activities to meet treatment objectives").

Team Performance

One of the most important indictors of psychiatric treatment team effectiveness is their ability to produce high quality treatment plans that effectively identify and address patient needs. Team performance in this study was measured with six items that addressed treatment plan quality (e.g., "Our team's treatment plan identify and prioritize patient needs", "The interventions in our treatment plans are individualized for specific patients").

Analysis

Structural equation modeling (SEM) with LISREL 8 (Joreskog & Sorbom, 1993) was used to test the causal relationships between variables. The application of SEM provides a way to 1) model and estimate multiple and interrelated causal relationships, and 2) represent unobserved variables or concepts in these relationships and account for measurement error in the estimation process (Hair, Anderson, Tatham, & Black, 1998). One advantage of LISREL is that it provides tests of relationships between constructs that are not attenuated by measurement error (Loehlin, 1987).

Results

Following a procedure suggested by Hair et al. (1998), data analysis was conducted in two stages. First, the adequacy of the measurement model was examined to evaluate the contribution of each item to the construct being measured. Second, the structural model was examined to test the fit of the hypothesized model with the data. For both the measurement and structural models, a wide variety of goodness-of-fit indices are available for assessing model fit. To assess overall model fit, the chi-square statistic (χ^2) and the goodness-of-fit index (GFI) were examined. The root mean square error of approximation (RMSEA), a measure relatively insensitive to sample size, and the root mean square residual (RMR) were examined as complementary measures to the GFI and χ^2. The adjusted goodness-of-fit (AGFI) was evaluated because it adjusts the GFI by the degrees of freedom in order to consider the parsimony of the model. To compare the model's fit in relation to the worst and best fit attainable from other nested models, the normed-fit index (NFI) was examined. In general, a good fit of the data is indicated by RMSEA and RMR values that approach zero (with those larger than .08 as unsuitable), and GFI, AGFI, and NFI values that approach 1. Finally, the coefficient of determination (R^2) was examined in relation to the structural model as an indicator of variation accounted for, not of model fit per se.

Measurement model

As is generally recommended, analyses were based on a covariance matrix. Initial analyses calculated the means, standard deviations, and reliabilities for each scale (see Table 1). All scales had adequate variance and reliabilities ($\propto$ = .69 to .91) and all items loaded on their a priori determined factor. For each variable the t values associated with each of the loadings exceeded the critical value for the .05 significance level (critical value = 1.96) and the .01 significance level as well (critical value = 2.58). This verifies the posited relationships between indicators and their constructs. The measurement model produced a chi-square value of 427.23 (df = 322, $p < .001$). Other fits indices included GFI = .81, AGFI = .76, NFI = .82, RMSEA = .050, and RMR = .082. These values indicated the fit between the proposed measurement model and the observed data was marginally adequate. Examination of the modification indices did suggest possible options for model respecification. However, the suggested modifications could not be theoretically justified. Therefore the measurement model was accepted. The intercorrelations of the measures presented in Table 2 indicate none exceeded .80, a level commonly regarded as indicative of problems (Hair et al., 1998).

Table 1: Means, Standard Deviations, and Reliabilities of Measures[a]

Measure	Mean	SD	Reliability
Information Sharing	2.89	.92	.74
Interpersonal Support	3.27	.91	.91
Equality of Influence	2.70	.57	.69
Task Clarity	3.27	.91	.86
Shared Mission	3.48	.80	.83
Leadership Support	3.52	.99	.86
Work Process	3.22	.87	.88
Team Performance	3.41	.73	.82

[a]Means represent the average response to items in the scale and standard deviations are the average standard deviation of items in the scale.

Table 2: Correlations Among Measures

Measure	INF	INT	EQL	TC	SM	LS	WP	TP
Information Sharing	1.00							
Interpersonal Support	.51	1.00						
Equality of Influence	.27	.17	1.00					
Task Clarity	.54	.73	.23	1.00				
Shared Mission	.57	.71	.14	.70	1.00			
Leadership Support	.50	.62	.22	.56	.62	1.00		
Work Process	.63	.71	.23	.71	.74	.61	1.00	
Team Performance	.49	.49	.25	.55	.53	.51	.65	1.00

Structural Model

A total of 18 paths were tested (see Figure 3) in the structural model. In addition to the nine paths shown in the conceptual model (Figure 2), nine additional paths were added. These paths were added in order to obtain an adequate number of indicators for the two of the latent variables. Thus, paths for the scale items for work process (items 56, 58, 59, 61) and team performance (items 77, 79, 85, 86, 87) were included in the structural model.

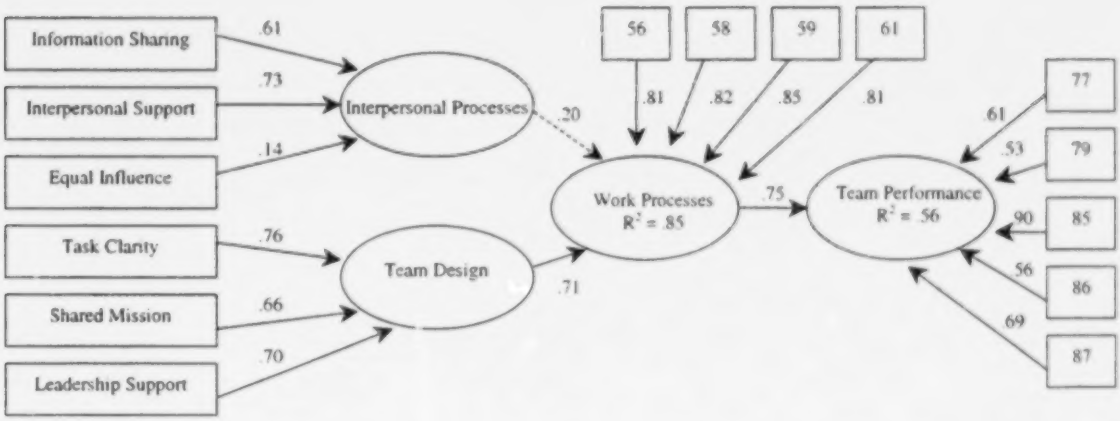
The results of the structural analysis are summarized in Figure 3 which displays the standardized path coefficients (beta weights), as well as the explained variance (R^2) for the dependent variables work process and team performance. A dashed line indicates unsupported paths. As can be seen, 17 of the 18 hypothesized paths were supported ($p < .05$). The structural model produced a chi-square value of 108.78 (df = 86, $p < .05$). The GFI (.90), AGFI (.86), NFI (.91), RMSEA (.045), and RMR (.042) were all indicative of acceptable fit.

As predicted, team performance was relatively well accounted for by the model (R^2 = .56) and work process emerged as a significant predictor (B = .75). The indication is that treatment plans quality is significantly enhanced when teams are able to successfully manage processes critical to the development and implementation of treatment plans. This includes the ability to manage intra-team disagreements in ways the make the team more effective, resolve conflicts in positive ways, and coordinate team activities to meet treatment objectives.

The results further suggest that work process is enhanced by team design factors (B = .71) as predicted by the Yeatts-Hyten model. Team design was an unmeasured latent variable in this study that was strongly influenced by

task clarity (B = .76), shared mission (B = .70), and to a lesser extent leadership support (B = .50). Contrary to expectations, interpersonal processes, another unmeasured latent variable in this study, was not a significant predictor of work process. Interpersonal processes were, however, significantly influenced by information sharing (B = .61), interpersonal support (B = .73), and, to a much lesser degree, equality of influence (B = .14).

Figure 3: Structural Model with Path Coefficients



Conclusions

This research tested the applicability of a portion of the Yeatts-Hyten (1998) model of SMT performance to psychiatric treatment teams. The overall pattern of relationships between independent and dependent variables was generally consistent with the Yeatts-Hyten model. Seventeen of 18 tested paths between predictors and dependent variables were significant indicating most of the predicted relationships held.

According to Yeatts and Hyten (1998), work process factors are those factors applied directly to the team's work or "where the rubber hits the road" in terms of actually doing the work of an SMT. These authors depart from previous models of SMT effectiveness to suggest that work process, not interpersonal processes, have direct effects on performance outcomes. The present research found work process to be a significant predictor of team performance, providing strong support for this conceptualization. On the other hand, the Yeatts-Hyten model indicates that interpersonal process affects team performance via its influence on work process. This prediction was not confirmed by the data: interpersonal processes was not a significant predictor of work process. There are several possible explanations for this finding. First, this finding suggests it is possible that treatment teams may display adequate interpersonal processes but still lack the other skills necessary to successfully manage team processes in the development and implementation of treatment plans. In other words, interpersonal processes may be to some extent necessary, as suggested by Yeatts and Hyten, but, as measured in this context, are not sufficient to predict team ability to manage treatment plans. Second, multicolinearity among the predictors may have suppressed the significance level of this path. Although no correlations exceeded .80, several approached or exceeded .70. Multicolinearity increases the standard error of the coefficients and makes it more difficult for the paths to achieve significance, particularly with a relatively small sample size. In short, only the strongest paths reach significance. Future research can help solve this problem with more substantial sample sizes and by operationalizing the independent variables to further reduce the level of intercorrelation.

This study found that team design elements significantly influenced work process factors. Team design was well predicted by the clarity of tasks among team members, a commonly shared vision of the team's mission or purpose, and to the availability of leadership support. These findings strongly suggest that when interdisciplinary treatment team members know what they are supposed to do and have leadership support for doing it, that the team will be better able work effectively and meet the performance standards required of them. Clearly defined individual and team tasks and goals is seen as critical to team effectiveness from both a conceptual (Hackman, 1987) and empirical perspective (Tannenbaum et al, 1992). The presence of these factors reduces intra-team conflict while improving work-related coordination. Leadership support is important because effective teams are dynamic entities

that evolve over time. Therefore the ability to meet short and long term performance objectives requires the presence of effective feedback mechanisms to allow the team as a whole and individual team members to make behavioral adjustments as needed. The present research suggests a key function of team leadership is to provide this mechanism: that is, to monitor and contribute honest feedback about performance.

Taken together, the findings of this study underscore the importance of attending to team design and work process factors in understanding effective psychiatric treatment performance. To further examine the role or interpersonal, team design, work process and other factors in the Yeatts-Hyten model, further research is needed. To more fully understand the complexity of SMT performance, this research should aim for larger samples in various organizational contexts that would enable group/team-level analyses with adequate statistical power.

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Expanding Theories of Career Development: Adding the Voices of African American Women in the White Academy

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Many theorists have proposed models to explain career development. However, the appropriateness of these models for women and minority groups is being questioned. Changes in the composition of the workforce, to include the increased number of minority professionals in White dominated institutions, call for new ways of theorizing career development. Using a bicultural lens, this paper examines the professional development of five tenured African American women in the White academy.

Keywords: Career Development, Biculturalism, Black Women

Traditional career development theories, upon which many organizational career development programs are based, have been widely criticized for their exclusion of minority voices and for generalizing the White male developmental experience to that of minority groups (Cheatham, 1990; Kerka, 1992; Thomas & Alderfer, 1989). Samples used in the development of career theories are usually predominantly white middle class males, yet the results of those studies are used to explain choice and behavior among African Americans and other minority groups. As Cheatham (1990) argues,

> These theories and instrumentations incorporate no observations of (a) African Americans' considerable experience with structural or racial discrimination, (b) culturally-influenced perceptions of the meaning of work, (c) differential availability of career information and guidance, and (d) economics and labor market forces that affect African Americans differently. (p. 335)

Thomas & Alderfer (1989) confirmed, however, that the statistics on occupational status of racial minority groups suggest that race is a strong predictor of position in the labor market and career patterns. Despite that fact, traditional career models tend to ignore race as an important variable that influences and hinders career development of individuals in organizations.

Culture and Career

Although race is an important variable in the study of career development of minority groups, it cannot be examined outside of its cultural context. To do so would mean, for example, that there is a universal Black race that shares a monolithic culture. The study of career development, therefore, must incorporate the personal, cultural, and the structural contexts of the experience. According to Van Maanen and Barley (1985), "culture mediates between structure and individual realm" (p. 35). The cultural perspective will serve to integrate the psychological or personal perspectives of career with the sociological and structural aspects of organizations (Derr & Laurent, 1989). Not surprisingly, Deer & Laurent (1989), Schein, (1977, 1984a), Wood (1991), among others, propose that a cultural framework would best capture the social reality of developing careers.

Derr and Laurent (1989) note that career development theories tend to be fragmented, focusing on one variable at the neglect of others. Barley (1989), Derr & Laurent (1989), Kerka, (1992), Schein, (1978), Van Maanen (1977) and Wood, (1991)) agree that careers have both a subjective and an objective component and that both components must be integrated to capture the totality of the career. Schein (1975, 1993) conceptualizes the subjective career as the internal career and the objective career as the external career. Schein (1996) describes the internal career as an individual's self-definition of a career and is the person's interpretation of her work life and her roles within it. The external career, on the other hand, represents the formal stages and roles that are defined by organizational policies and societal expectations of occupational structures (p. 1).

In his study of careers, Schein (1977) found that most people form a strong self-concept that holds their internal career together even as they experience problems and changes in their external career. Hence his concept of "career anchors." According to Schein (1996, p. 2), a person's career anchor is his or her self-concept consisting of (1) self-perceived talents and abilities, (2) basic values, and most important, (3) the evolve sense of motives and

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needs as they pertain to the career.... Once the self-concept is formed, it functions as a stabilizing force, hence the metaphor of "anchor" and can be thought of as the values and motives that the person will not give up if forced to make a choice. Wood (1991) also notes, "the very idea of self-concept is culture bound" (p. 25). Therefore, in order to examine the self-concept and its role in career development, we must situate developmental experiences within a cultural context. Using a bicultural lens, this study examined the professional development experiences of five tenured Black women in the research academy. The purpose of the study was to explore the developmental experiences that contributed to their successful career in the White academy. The following questions guided the initial study:

1. How do Black women's early developmental experiences in the Black subculture and in the White dominant societal culture influence their professional development?
2. How do Black tenured female faculty interpret their experiences in the White-dominated culture of the research academy?
3. What adaptive strategies do Black female faculty employ to manage the White academic culture?

This paper focuses primarily on the perceived determinants of success (defined by tenure and promotion) among five African American tenured female faculty members at a predominantly White university in the Southwest. While the data point to the underrepresentation and to the poor status of Black women in higher education, little attention has been given to the successful women who have made it against all the odds.

Status of African American Women in the Academy

African American female faculty continues to be under represented in White dominated research universities (Carter & Wilson, 1992; National Center for Education Statistics, 1994). According to the 1993 Digest on Education Statistics, Black faculty comprised 4.7 percent of all full-time instructional faculty in higher education. Black women faculty made up 2.2 percent of the full-time faculty. Black women faculty who are associate and full-time professors made up 0.6 percent full-time faculty and 1.2 percent of all associate and full professors (p. 227). In addition, the National Study of Post Secondary Faculty (1994) revealed that 1.2 percent of the positions in public research universities and 1.3 percent of the positions in public doctoral universities were held by Black women (p. 15).

From the data, one can conclude that Black women are almost invisible in public research and doctoral universities. Those who are able to enter these institutions, however, find themselves at the bottom of the hierarchy and are among the least likely to be tenured (Collins, 1986; Howard-Vital, 1987; Silver, 1988). Furthermore, several researchers alert us to the negative experiences of Black female faculty as they struggle to gain access, inclusion, and tenure in white institutions of higher education (Granger, 1993; Humphrey-Brown, 1997; James & Farmer, 1993; Lopez, 1991; Smith, 1992). These writers speak of the alienation, isolation, and social marginalization that Blacks experience in predominantly White institutions. Despite these problems, some women have achieved tenure and promotion, becoming professionals of high regard at their institutions. It is critical, therefore, that the literature that informs career decisions in organizations include theories that address this group's career development experiences.

Theoretical Perspective

African Americans face the dilemma of double consciousness as they struggle to survive in two distinct cultural worlds--one White and one Black (DuBois, 1903; Hopkins, 1987). The Black life world consists of the Black community with its demands and expectations of professional women. The White life world is made up of the White institutional structures--the school and the workplace--within which African American women must interact and survive in order to be professionals.

To understand the historical process of these women's interactional experiences in their bicultural life worlds, I drew on bicultural life structure theory to guide the study. The bicultural perspective focuses attention on the interplay between the two cultures and its effects on the lives of racial minority workers (Jones, 1986). Wolfe, O'Connor, and Cary (1990) define life structure as

> the underlying pattern or design of a person's life at any given time.... The life structure is the bridge between one's inner workings and the demands of society, and is the product of both

> forces. It is the connection between self and circumstances.... It allows one to adapt to one's surroundings. (p. 958)

Valentine (1971) suggests that the bicultural model is best suited for the study of African American behavior within the mainstream culture. He further notes,

> The collective behavior and social life of the Black community is bicultural in the sense that each Afro-American ethnic segment draws upon both a distinctive repertoire of standardized Afro-American group behavior, and simultaneously, patterns derived from the mainstream cultural system of Euro-American derivation. Socializations into both systems begin at an early age and continue throughout life, and are generally of equal importance in most individual lives.... The idea of biculturation helps explain how people learn and practice both mainstream culture and ethnic culture at the same time. (p. 143)

A bicultural life structure allows the Black woman to hold on to her African American identity as she interacts with the White-dominated culture.

Methodological Perspective

Kent Seibert (1996) notes that people do not learn from their experience alone. He suggests that learning comes from the interpretation of the experiences. Therefore, to understand the process by which African American women make meaning of their professional development experiences in white-dominated institutions, I drew on the interpretive interactionist perspective. Habermas (1971) calls this the historical-hermeneutic paradigm. As Chovanec (1996) explains, "it is a study of the subjective and everyday experiences of human beings from their own point of view. In interpretive research, the emphasis of the study is on the meanings and interpretations of social worlds. The intent is to tap into complex social interactions and explore the subjective experience of the phenomenon" (p. 56). The interpretive paradigm, therefore, focuses on the participants' interpretation of their experiences.

Method

This study took a biographical or life history approach as each participant and I attempted the reconstruction of her bicultural lives to discover the sociostructural experiences contributing to her successful career in the White academy. Each woman's sociostructural experiences result from her interactions with the sociostructural life worlds of family, community, institution, and the wider society. In order to understand the totality of the women's experiences, I examined each life within its sociocultural contexts. Patricia Collins (1990) clearly articulated that the African American female cannot be viewed outside the context of family, community, and culture (p. 25). The interview guide was purposefully constructed to examine the career development experience as an integrated whole stemming from a multiplicity of experience occurring within various sociostructural contexts. The call for the study of career development as an integrated whole has been made by several researchers to include Derr & Laurent (1989), Hall (1996), Hall & Mirvis (1996). Hall (1996), for example, notes

> What is needed in career theory and practice is a more holistic view of the individual, one that encompasses all spheres of activity and all corresponding facets of personal identity. When we look at career and occupational experiences later in the individual's life, we need to see these experiences in the context of that individual's total life, encompassing all other important current roles and subidentities as well as hopes and dreams for the future. (p. 7)

The participants for this study consisted of five tenured African American female faculty from a major White research university in the southwest. The five study participants--Elizabeth, Jean, Kendra, Myra, and Sara--made up the total population of African American tenured female faculty at that institution. They ranged in ages 45 - 51 and came from diverse disciplines--Journalism, Social Work, Anthropology, and Engineering.

Analytical Techniques

To understand and interpret the historical experiences contributing to the professional experiences of African American female faculty in White research universities, I analyzed the data in three ways. First, I did a case analysis

of each woman's story and constructed a narrative of her experiences. Each case analysis and narrative was sent to participants for member check. Second, I isolated each significant experience and situated it within the sociostructural context of family, community, institution, and society. Third, I did a cross case analysis to discover the common themes in the participants' developmental experiences.

Overview of Findings

The results of a study of Black women's professional development in White dominated institutions suggests that the families built the foundation for the women's professional development by providing them with a nurturing environment within which to develop, high expectations and support to meet expectations, and a set of legacies or messages that sustained them in their professional development journeys. The Black community augmented each family's contribution by providing opportunities for Black self-definition, knowledge acquisition, and visibility. The White societal culture, through its privileged academic institutions, provided opportunities to fulfill dreams of professional careers. The study finds that although the White dominant culture was sometimes hostile and alienating, the women persevered knowing that opportunities for professional careers existed in that culture.

From the academic institutional life world, participants found support from the top levels of the administration and tenure support from their schools, from mentors, or from their professional organizations. They encountered enhancing opportunities to contribute to university and student affairs and for increasing their visibility in the academy. Among the disabling experiences were multiple role expectations, alienation from both institution and community, lack of support from colleagues, especially Black colleagues, and experiences of racism.

Discussion: Determinants of Success in the White Academy

The study results indicate that participants found success in the White culture through (1) positive self-definition in creating positive images and rejecting society's stereotypical images of themselves as Black women, (2) safe space, (3) knowledge of the culture and its role expectations, (4) visibility promoted by mentors and through participation in professional organizations; and (5) a fluid life structure that allows them to float in and out of various cultural and socioeconomic life worlds.

The Power of Self-definition

One of the most illuminating findings of this study is the role of positive self-definition in the participants' management of White-dominated cultures. "The basis for self-definition is one's sphere of influence from which self-concept grows" (Kerka, 1992, p. 3). Ella Louise Bell (1987) suggests that the Black woman's cultural affiliations have a definite impact on the development of her identity.

Analysis of the participants' developmental experiences suggest that the school, together with the family and the Black community, contributed greatly to building positive definition of the Black self. The Black schools, during the period of segregation, functioned not only as a transmitter of knowledge, but they had the expressed functions of building self-esteem, self-efficacy, and of preparing students to enter and to become successful in the White world. These were accomplished partly through implicit and explicit messages about Black self-worth. Core themes running through their messages were that they were just as good as Whites and their Black skin did not make them inferior. Jean's band director, for example, was very influential in the development of her Black cultural identity and positive self-worth. As she recalled,

> My band director was an influence on all of us in the band because he would talk to us about getting better than what we are, but it was always in reference to White people. He always talked about advancing and improving ourselves because we were Black, and you know, we had to be better.

Parents and community members transmitted similar messages about being Black in a predominantly White society. They prepared the youth for the debilitating experiences they might encounter in the White world. Kendra's parents, for example, told her, "you will experience racism, and you will be in situations where people will not want to sit next to you. Do not worry about it; remember that you are just as good as they are. The only difference is the color of your skin."

Although they were confronted with White domination and oppression during a period of total segregation, African Americans adopted what Collins (1991) and hooks (1990) call *a culture of resistance* in order to create a social reality of Black equality and positive cultural identity. Consequently, the participants, through implicit and explicit messages from family, community, and school, developed a cultural identity that formed a lens through which they viewed themselves in relation to Whites. They did not see themselves as inferior to White people, but as different from them, and that difference did not make them inferior. This perception of "different but equal" was found to be critical to the participants' perception of their place in the academic institutional culture.

Use of Safe Space

The use of a safe space was found to be a method by which the women preserve their constructed definition of self when the environment becomes disconcerting. According to Ward (1995),

> The safe space serves as a prime location for the Black woman to resist objectification as the Other. In safe spaces, as domination is seldom the prevailing operative, Black women may, theoretically, freely function and do or be that which she pleases. (p. 153)

Ward (1995) also notes that the predominantly White institution does not provide any inside safe spaces wherein Black women are truly free to develop and express their self-constructed knowledge of their Black womanhood. The findings from this study do, however, indicate that the participants were able to identify and access places or people in the Black community where their objectification as the Other was minimized. bell hooks (1990) refers to these safe spaces as "homeplace." She describes homeplace as

> a safe place where Black people could affirm one another and by so doing heal many of the wounds inflicted by racist domination.... We can make homeplace that space where we return for renewal and self-recovery, where we can heal our wounds and become whole. (p. 42)

Elizabeth, for example, resists institutional marginalization by retreating to the safe place she has created in her home. As she explained,

> I won't allow myself to feel marginal at this university. I guess if this meant more to me, if it were my whole life, then perhaps I may have a different view of it; but it's only part of my life.... I love my work, but this is not my main life.... I am very happy with my family. I have my husband and my daughter and we are very happy; we have lots of fun together. We have a beautiful home to come to. This is not my only reality. When this becomes too much, I can go home and forget it, at least for a while.

Sara's safe space, on the other hand, consists of her childhood neighborhood where she grew up within an all Black academic community. Going back to her community gives her a sense of wholeness and reminds her of the support, the love, and the safety she received from the family and community. This is particularly important to Sara as she works in an environment where she sometimes feels like an outsider. As she explained,

> I think the times I feel like an outsider are really when I go to meetings in which I don't know anybody else, like some of the committees that I serve on. Sometimes I go, and I get the feeling when I walk in that there is a surprise that I am there. I hear some of the interactions that suggest that some of the other faculty attending these meetings know one another. Those are the times that I feel like an outsider because I don't know anything about them, and they don't know anything about me.... When we go home, there is such a feeling of well being. It feels good to be there. We still know the people, and they know me because of my father. The neighborhood is still predominantly Black. I try to go back at least once a year to get back in touch with who I am and from where I came.

Retreating to a safe space is a method of resistance that Black women embrace to escape forces of oppression prevalent in the dominant society. The immediate and extended family, churches, African American community organizations, and even the individual psyche have been found to be important locations where African

Americans retreat to safety. This safe place becomes a house of refuge where Black women can reconstruct any image of herself that has been threatened as a result of her interactions within White dominated institutions.

The Power of Knowledge

The power of knowledge was found to be very significant to Black women's career development in an academic culture that professes the pursuit, creation, and disbursement of knowledge. The findings indicate that knowledge of the academic culture and knowledge of role expectations contributes to Black women's ability to meet cultural expectations.

Knowledge of Academic Culture

The culture of the academic profession is based on the concepts and symbols of academic freedom, the community of scholars, collegial governance, individual autonomy, and service of society through the production of knowledge, the transmission of culture, and education of the young (Clark, 1984). Participants placed great emphasis on the importance of cultural knowledge in successfully managing the academic culture. Their knowledge of the culture was first enhanced through their role performance as teaching and/or research assistants and through relationships with mentors and other significant members of the culture. Elizabeth, for example, said that her mentor was grooming her for the academic career and giving her a visual imagery of the academic culture. As she explained,

> He was bringing me along, even though at the time, I didn't know that's what he was doing.... He gave me a picture that exemplified an ideal of wouldn't this be great, working with ideas, working with graduate students. Wouldn't this be great not to have a full-time job?

By working with her mentor, she had a picture of life in academy. Elizabeth further suggested,

> During the Ph.D. program, you need to get a teaching assistantship or a research assistantship, a job that will connect you with other professors if that is possible. Those of us who had jobs within the university were the insiders; we knew the faculty, and we knew the culture.

Through their relationships with significant members of the culture, the participants learned its rules and expectations, and such knowledge facilitated their membership into the culture. Myra, in referring to her present institution, noted, "I don't feel like an outsider in the university because I understand how things run here." Her knowledge of the way things work enables her to successfully manage expectations of the job.

The socialization process of the five study participants was facilitated through their participation as students and through their insiders' positions as assistants and proteges of influential members within the culture. Their early interactions with significant members of the culture gave them a competitive advantage for developing the competency necessary to successfully meet cultural expectations.

Knowledge of Role Expectations

Research studies on the process of tenure in research universities often reveal the lack of knowledge that participants have about the process. Menges and Exum (1983), for example, note that many faculty say that the criteria are unclear, inappropriate, or unrealistic. In a more recent study of junior faculty's perception of the tenure process in research universities, Verrier (1992) found many of the participants were unclear about the process, had a preoccupation with knowing where they stand in the process, and had a craving for specific indices or clearly defined road maps. Contrary to the findings of his study, this study found that the women had clear knowledge of the cultural expectations with regards to the tenure process. They knew the political workings of the process.

The women came in to the academy with the awareness of its cultural rules. Although they found some of the rules inappropriate, they chose to follow the rules to ensure their success in the culture. When Jean and I were discussing the issue of cultural expectations, she said,

> I always said, even before I went up for tenure, I know the rules of this game that I have chosen to enter, like them or not, these are the rules. If I want to succeed in this system, then I have to abide by the rules.... Know the rules and play the game by the rules.

Knowledge of the rules enhanced Jean's ability to meet the expectations that guided the tenure process. Myra also articulated the importance of playing the game by the rules. She said, "There are rules, follow the rules." To Myra, knowing the culture and its expectations means knowing not only the explicit but also the implicit expectations that the culture has of Black women. She noted, "You really have to do what you are supposed to do, and you have to do a lot of it because being an African-American, people are gunning for you. Practically everybody is gunning at you." Myra is suggesting that the Black woman should exceed cultural expectations in order to avoid the guns of others in the academy. The message, "in order to be equal, you have to be better," is part of her ancestral legacy and it is a constant life script after which the professional Black woman patterns her life.

The Power of Visibility

Although Black women are rendered invisible by virtue of their femaleness and their Blackness, successful Black women are rendered highly visible by their institutions. As one participant said, "The University has my face plastered all over campus." The development of visibility started in the family and community life worlds, was promoted in the White institution through mentoring relationships, and enhanced by the employing institution and through the women's participation in regional, national, and international organizations. The resulting effects of such visibility are the opportunities they provide for career development and enhancement.

Kendra noted that one's visibility within her academic community becomes crucial at review time. She said,

> You need to be visible in the community that you say you are an expert in. You need to be visible at your national conferences and in your publications. They ask other people who are experts in the field, "What do you know about this person?"

The findings suggest that for one to become powerful in the academy, she has to be known, and in order to be known, she must be visible within her professional community.

Fluid Life Structure and Bicultural Competence

An individual's mode of participation within her various sociostructural life worlds depends upon the fluidity or rigidity of the life structure. This study found that the participants' success in the academy is partly due to their fluid life structure, which enables them to float in and out of their various sociocultural groups. By having a fluid life structure, the participants were able to navigate their bicultural worlds with little of the strain and stress Bell (1987) found associated with biculturalism. They saw their bicultural lives as interconnected rather than separated. When I asked Kendra, for example, about the duality of her life, she said,

> No, I don't have a dual life. This is all my life. What I am finding is that we may have some cultural uniqueness, but what has brought us together is our work. My professional and personal life is just a continuum.

Jean, on the other hand, agreed that she had a Black life and a White life, but she did not see any distinct separation between the two. As she remarked, "I guess there is a Black life and a White life. Work is White and everything else is Black, meaning social contacts and all that, but that is all my life; I cannot distinctly separate the two."

Sara's comments also indicate her inability to distinctly separate her world into a Black world bounded off by a White world. She noted,

> When I go home, it is really totally apart from the university world. What I am in my private life at home, I am still connected to the university in a sense that I am writing and doing things related to my work. I am just not connected on a social basis.... I think I am a part of both worlds. It is hard to separate the two. It is all my world.

Seelye (1994) suggests that a truly bicultural person acknowledges that she is not merely 50 percent X and 50 percent Y, but unique blends of X and Y with a variety of successful behaviors to choose from when dealing with X's and Y's (p. 29). He notes that the bicultural person does not deny the influence of one or another culture on her character but sees her life as a composite of all experiences originating from her various life worlds.

The power of Black women to pattern their mode of interactions to fit their Black and White life worlds is what La Fromboise and Associates (1993) term bicultural competence. They suggest that individuals living in two cultures may find the experience to be more beneficial than living in a monocultural lifestyle (p. 402). They also note that to be biculturally competent, one must possess a substantial degree of personal integration and individuation to avoid the negative consequences of a bicultural living situation. The participants of this study were found to have high self-esteem and Black cultural identity, elements that Seelye (1994) finds necessary for becoming biculturally competent.

Conclusion

The findings from this study support Schein's (1978, 1993) theory of internal and external careers and his concept of career anchor. Much of the dimensions of the developing career that emerged from the study can be organized as the internal or external career. Schein's notion of internal career represents the individual's career self-concept or the meaning she makes of her career. The internal career for these five participants is represented by (1) their positive self-definition which is anchored in cultural identity (2) their management of such definition by finding a safe space where they can reclaim any aspects of the constructed self which, by their perception, may have been threatened as a result of their interactional experiences, and (3) their fluid life structure and bicultural competency which allow them to successfully navigate their bicultural life worlds and to meet the expectations of both worlds.

Their external career, according to Schein (1993), refers to the actual steps that are required to progress through an occupation. The participants external career was facilitated by (1) their knowledge of the academic culture and its expectations, (2) socialization into the culture, which was facilitated by their mentoring relationships with significant members of the culture, and (3) visibility within the academic profession.

The women's career was found to be anchored in their self-definition. According to Schein (1993), "The career anchor is that one element in a person's self-concept that he or she will not give up, even in the face of difficult choices.... The anchor is the self-image" (p. 24). The women were found to have a strong sense of self, which was anchored in the Black culture. Their Black cultural identity can be considered as the one element that they would not give up, even if they were faced with difficult choices.

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The Relationship Between Selected Variables on Diversity and the Implementation of Diversity as Successful Corporate Culture Change Programs

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Demographers sounded the alarm in the late 1980s alerting corporations that by the year 2000 white males would make up only 45% of America's workforce. Companies concluded that they needed a way to manage multiculturalism and, as a result, workforce diversity program initiatives were born. The purpose of this study was to identify variables that are key to the successful implementation of diversity initiatives as culture change programs.

Keywords: Training Diversity, Diversity Backlash, Affirmative Action

As we approach the next millennium, major corporations are increasingly reliant upon a workforce that is more diverse in its composition of culture, ethnicity and gender. Consequently, the marketplace is being redefined along global lines which add complexities to the successful conduct of business. Many organizations across the American landscape are creating diversity programs for the purpose of properly responding to changing conditions in order to maintain or gain a competitive advantage (Beilinson, 1991; Cox, 1993; Gerber, 1990; Lamb, 1991, and Purnell and Tervalon, 1991). In an effort to prepare their employees to meet these challenges, major corporations have instituted workforce diversity programs. Rarely do we see a solution becoming the problem, but when improperly managed, workforce diversity programs can produce undesirable results. Negative results measured primarily in the form of backlash may be experienced by white males, females and/or minorities who may feel that diversity efforts unjustifiably neglect their needs and/or portray them in a less than positive light. These individuals may feel unjustifiably excluded or included in the workforce diversity initiative and may feel that there is a lack of organizational commitment to the diversity effort (Thomas, 1991).

Paradigm shifts in the composition of the workforce, emergence of a global marketplace and economy, and technological change, among others, are in combination prompting corporations in America to rethink their conduct of business (Fine, Johnson, and Ryan, 1990). Of paramount importance, is the challenge of harnessing the human resources potential of the workforce to service the needs of a clientele that increasingly is of equal or greater diversity (Griggs, 1995; Thomas, 1991, 1996).

Problem Statement and Theoretical Framework

Past research in the field of corporate diversity programs has yielded several questions relating to the future of such programs and the basis from which they can be guided. The external impact of diversity on the workplace is somewhat clear; however, the research findings are not nearly as conclusive with regard to the effect on employees within these organizations nor does it delineate how people can work together more effectively in order to cope with these changing realities (Marshall, 1995).

The review of the literature established that demographic changes occurring in the American workplace have profound implications for the way we think, feel and see the world around us and thus, how we will staff and govern organizations and businesses in both the near and distant future (O'Reilly, Caldwell, and Barnett, 1989). Many programs include EEO/Affirmative Action elements but one must note that diversity is not a synonym for affirmative action, nor is it a code word for equal employment opportunity (Thomas, 1991).

This study investigated the success of introducing diversity initiatives into organizations as cultural change programs within Fortune 250 companies. In actuality, this study was designed for the purpose of establishing the relationship between selected variables on diversity and the implementation of diversity as successful culture change programs. The research focused on corporate diversity implementation programs and incorporated a self-reporting questionnaire technique in order to determine the effect of such programs on the stated variables.

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Research Hypotheses

Based on the review of literature, what is known about industry practices, and the benchmarking exercise, the focus of this investigation was formalized in the following null hypotheses.

H_{01}: There is no relationship between the period of existence of workforce diversity programs and the level of diversity present in the workforce.

H_{02}: No relationship exists between the number of training hours and the extent of reported backlash.

H_{03}: No differences exist between IMPCR, IMPCI, IMPCUST, IMPEHS, IMPPROD, IMPACC, and IMPSUB and their impact on backlash.

H_{04}: No relationship exists between the inclusion of diversity management goals in managers' performance evaluation and reported backlash.

The following anacronyms may be defined as follows: community relations (IMPCR), company image (IMPCI), meet the needs of customers (IMPCUST), enhance employee skills (IMPEHS), increased productivity (IMPPROD), to provide access to wider skills and talents in the labor pool (IMPACC), and substitute for affirmative action (IMPSUB).

Methodology

Research Design

This survey research included testing hypotheses to identify the relationship of selected variables on diversity and the implementation of diversity as successful cultural change programs. The study was designed to answer four main research questions with the goal of contributing information to the body of knowledge regarding the successful implementation of diversity as cultural change programs.

Sample

The population for this study consisted of Fortune 250 companies. Fortune 250 companies represent the upper half of the 500 largest publicly traded United States firms published by Forbes Magazine which is a trademark for some of the largest industrial corporations in the United States. Companies included on the Fortune 500 list are those companies that are considered to be well-run organizations. The researcher chose Fortune 250 companies due to economic factors and ease of data collection and data processing.

Seventy-four (30%) of the Fortune 250 companies responded to the survey instrument. Fifty-one of these 74 respondents (68%) reported having implemented a workforce diversity program. These 51 companies had an average workforce of 32,467 employees. Most respondents held titles such as Vice President, Human Resources; Director, Human Resources; Manager, Diversity/EEO; Sr. Vice President, Corporate Diversity; or Director, Work Force Diversity.

Research Procedure

The questionnaire, which was developed for this investigation, was based on the findings of a "benchmarking activity". This benchmarking phase of the investigation included visits to five of the "best-in-class" corporations and a preliminary survey with 12 selected corporations. During this phase of the study the researcher was primarily interested in determining if a set of "best-in-class" variables existed that could be further studied and field-tested.

The questionnaire was developed in order to collect demographic information, information regarding components of diversity programs and how they are perceived, and information related to how diversity is being managed. Prior to the distribution of the final questionnaire, the content was analyzed by a panel of experts and the instrument was piloted with a group of 14 companies. The pilot study insured that all items could be interpreted by respondents and that the data collected could be suitably analyzed.

Each of the Fortune 250 companies were contacted by telephone in order to stimulate involvement. Next an introductory cover letter containing the purpose of the study, a request for cooperation, and a promise of anonymity was mailed to all companies. Respondents who chose to identify themselves were also promised a copy of the results of the study.

Pre-stamped, self-addressed envelopes were also provided with each survey. All surveys were mailed to an identified contact person with a request to return the survey within three weeks. Follow-up calls were made two

weeks after the initial mailing in order to remind participants to return the completed surveys. All 250 respondents were asked to complete the survey based on his/her knowledge of their organization and their workforce diversity program. Participating companies were also informed that questions 1 to 12 could be answered by all organizations, regardless of the implementation stage of their diversity initiative.

Data Analysis Procedures

Correlation analyses were used to test the first and second null hypotheses using the Pearson product moment correlation. Testing of the third null hypothesis required the use of multiple discriminant analysis with Box's M test and Wilkes' Lamda and univariate F ratios to determine the level of significance of individual variables (Hair, Anderson, and Black, 1995). The fourth null hypothesis was tested using chi-square.

Results and Conclusions

The results and conclusion of this study must be reviewed in light of the limitations of this investigation. The study only surveyed Fortune 250 corporations and did not focus on industry type. Furthermore, the study focused primarily on broad variables. Finally, the review of the literature indicated that this study is one of the first of its kind of this magnitude and that diversity initiatives are relatively new in American industries.

Results and Conclusions

Research Analysis

Fifty-one (68%) of the 74 respondents reported having implemented a workforce diversity program. Subsequently, all analyses were based on a sample size of N=51. The survey instrument instructed respondents to list the percentage of women and minorities currently working in one of three categories: management, professional jobs, and sales positions. Respondents were also instructed to use the standard EEO definitions when responding to the survey.

Correlation analysis was used to evaluate the relationship between period of existence of the workforce diversity program and the amount of diversity present in the organization. Using the Best-Kahn method (1986) for evaluating the magnitude of a correlation, the null hypothesis (H_{01}) was rejected in favor of the research hypothesis (for each workforce position) which indicates that a positive relationship exists between the period of existence of workforce diversity programs and the level of diversity present in the workforce for women and minorities.

This evidence suggests two possibilities: 1) given time, workforce diversity programs can be effective tools in influencing a more diverse workforce in terms of the employment of women and minorities in management, professional, and sales positions or 2) as the workplace becomes more diverse, workforce diversity programs are becoming more prevalent.

With regard to null hypothesis H_{02}, respondents were asked to indicate the level of backlash experienced as a result of having implemented a workforce diversity program from "not at all" to "a great extent". Backlash is defined as lack of commitment to the diversity effort which is most often associated with white males, females, and/or minorities as indicated by Thomas, 1991. Similarly, respondents were asked to indicate the number of diversity training hours provided to officials and managers, professionals, and sales workers. The data reported in Table 1 delineates the relationship between training hours and backlash.

Table 1
Correlation Analysis of Hours of Training and Backlash (N=51)

Workforce Population	Pearson Product Moment Correlation Coefficient	Strength	Significance	Reject H_0
Officials & Managers	-.089	Negligible	.53	No
Professionals	.033	Negligible	.82	No
Sales	-.133	Negligible	.35	No

As indicated by the data in Table 1, this investigation failed to reject the three null hypotheses associated with the relationship between the number of workforce diversity training hours for officials and managers, professionals, and sales workers and reported backlash. Therefore, the null hypotheses of no relationship were retained. This is an indication that (for officials and managers, professionals and sales employees) an increase or decrease in the number of diversity training hours has no significant impact on the amount of reported backlash.

Null hypothesis H_{03}, relates to items in the survey instrument asking participants to state the importance of seven diversity issues related to the implementation of diversity programs. Participants were asked to rate the importance of the following variables with a rating of "1" being of low importance and a rating of "5" being of high performance, community relations (IMPCR), company image (IMPCI), meet the needs of customers (IMPCUST), substitute for affirmative action (IMPSUB), enhance employee skills (IMPEHS), increased productivity (IMPPROD), and to provide access to wider skills and talents in the labor pool (IMPACC). Since the dependent variable (backlash) was an ordinal variable and the independent variables were interval, discriminant analysis was utilized as the appropriate statistical technique.

Since the objective of this investigation was to determine which of the independent variables are the most efficient at discriminating between more and less backlash, a stepwise procedure was used. The Mahalanobis D^2 measure was used with the forward stepwise procedure. The stepwise procedure starts with all of the variables excluded from the model and selects the variable that maximizes the Mahalanobis distance between the groups (Hair, Anderson and Black, 1995). The Mahalanobis distance is a distance index between groups that take into consideration group variance-covariance structure. Variables were included in the model based on their discriminating powers. The results indicate that five variables entered the model and were the best discriminators based on their Wilks' Lamda values.

Because this is a four-group discriminant analysis model, three canonical discriminant functions are calculated to discriminate between the four groups. The data in Tables 2-4 indicates that function one is the only one with rho < .20. However, function one accounts for 62.89% of the variance.

Table 2
Summary of Stepwise Discriminant Analysis (N=51)

Step	Variable Entered	Wilk's Lambda	Between	Groups
1	IMPPROD	.90806	0	1
2	IMPSUB	.84928	1	2
3	IMPCI	.74361	0	1
4	IMPCUST	.69086	1	2
5	IMPEHS	.64551	0	1

Table 3
Canonical Discriminant Functions

Function	Percent Variance	Canonical Correlation	Significance
1	62.89	.4834	.1752
2	24.11	.3235	.4524
3	13.00	.2434	.4268

Table 4
Standardized Canonical Discriminant Function Coefficients

	Function 1	Function 2	Function 3
IMPCI	.57	.63	-.02
IMPCUST	.44	-.60	-.00
IMPEHS	-.23	.04	1.14
IMPPROD	.75	-.36	-.44
IMPSUB	.44	.47	.16

The data indicates that the discriminant function achieves a high degree of classification accuracy with a hit ratio of 45.10% compared to a 25.0% chance ratio (1-4 categories of backlash). The final measure of classification accuracy is the Press's Q. It tests the statistical significance that the classification accuracy is better than chance (Hair, Anderson and Black, 1995). The calculated Press's Q value for this investigation is:

$$\text{Presses Q} = \frac{[51 - (45 \times 4)]^2}{51\,(4 - 1)} = 109$$

Since the chi-square critical value at the .001 level of significance is 10.827, the discriminant analysis can confidently be described as significantly predicting group membership.

An examination of the data in Tables 2-4 provides an indication that two variables [improve productivity (IMPPROD) and substitute for affirmative action (IMPSUB)] contribute somewhat in discriminating between groups. A closer look at function one indicates that the variable "to improve productivity" (IMPPROD) impacts heaviest on reported backlash (.75). Based on the significant improvements in classification accuracy, the investigator rejects the null hypothesis in favor of the research hypothesis which states that linking diversity to AAP will have a greater impact than other benefits/issues on the amount of reported backlash experienced in the workplace.

Finally, with regard to H_{04}, survey participants were asked to answer "yes" or "no" to the question: Is progress toward meeting workforce diversity goals included in a manager's performance evaluation? They were also asked to indicate the level of backlash resulting from their workforce diversity programs by checking one of the following levels: not at all, to a little extent, to some extent or to a great extent.

To test this null hypothesis, the investigator considered the variables under investigation were both nominal variables, one with more than two classification levels. A 2 x 4 contingency table was constructed and a chi-square distribution was employed as the statistical measure. Since the chi-square distribution is a non-parametric test, assumptions of normality and homogeneity of variance are assumed to be adequate for this evaluation (Ary, Jacobs, and Razavieh, 1985). The test statistic to be computed for the 2 x 4 contingency table is chi-square = 3 degrees of freedom. Therefore, the critical value of the test statistic is chi-square =7.815. The calculated statistic was nonsignificant, chi-square (3) = 4.57, rho > .05. The null hypothesis is retained, and the conclusion is that no relationship exists between inclusion of diversity management goals in a manager's performance evaluation and reported backlash. The evidence suggests that backlash is unaffected by whether or not diversity goals are included in managers' performance evaluations.

Summary

In summary, the research investigated provides a clear indication that there is a strong relationship between the level of diversity in the workforce and the maturity of workforce diversity programs. The results indicate that diversity training has little or no impact on the level of reported backlash which could be attributed to the quality of the training or the duration of the training.

Secondly, some diversity issues have a greater impact on the level of reported backlash than others with programs serving as a substitute for affirmative action and those that concentrate on improving productivity being the most likely discriminators. Finally, including diversity management in the managerial performance evaluation process does not increase nor decrease the level of reported backlash. At this point, including diversity in managers' performance evaluations appears to be a non-issue.

The literature indicates that there are three primary reasons why organizations faced with demographic changes undertake cultural diversity programs including affirmative action, valuing diversity, and that diversity is linked in important ways to organizational performance improvement. This study supports the theory that workforce diversity initiatives that are closely aligned with affirmative action initiatives are more likely to result in backlash than those that are aligned with managing diversity as a business necessity.

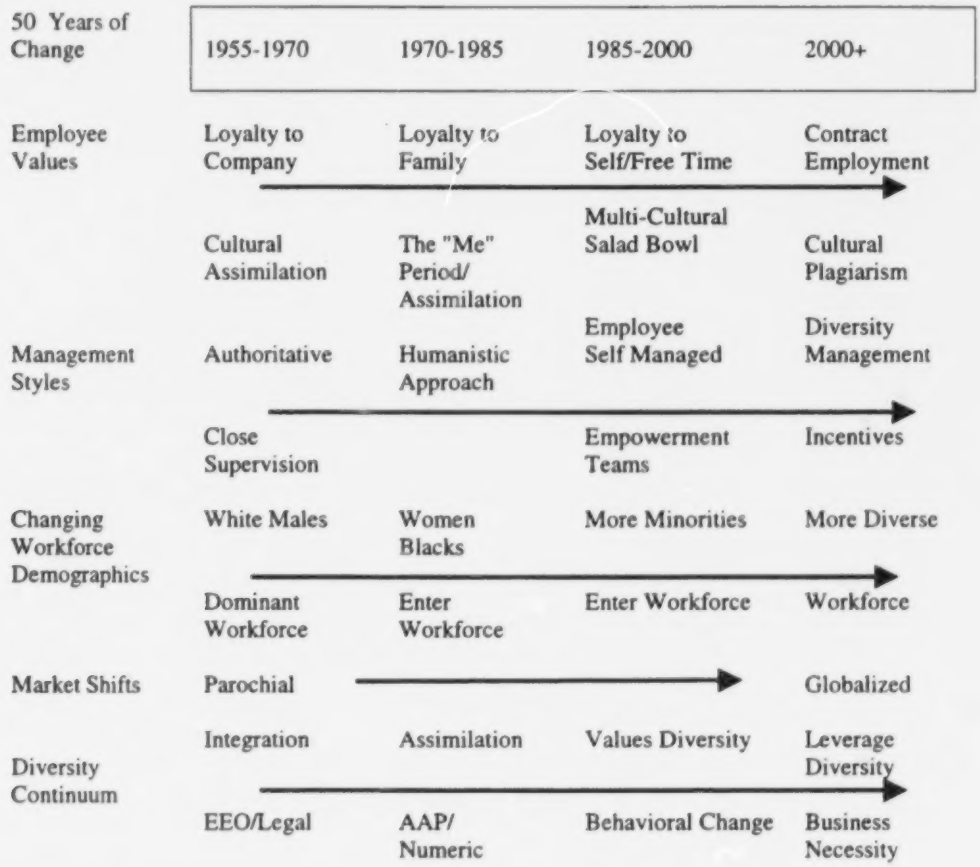

Figure 1: Diversity as business necessity

This investigation led to the development of a model (See Figure I) that views diversity as a business necessity. This model suggests that in most organizations management is responsible for maximizing investments in human and other capital. That is, it is management's responsibility to assure that goods and services are rendered at high quality levels while controlling for the cost of human (and other) capital. The actual measurement of the return on human capital may be accomplished in several ways. This model suggests the use of gross margins. Ideally, we would want gross margin per employee to increase with management interventions such as training, development, organizational change (centralized vs. decentralized services), technological breakthroughs, automation of manufacturing processes and systemic approaches to functional activities and diversity culture change programs. However, management's ability to implement many of these productivity initiatives is dependent on employees' ability to understand and function in a given environment and is heavily influenced by organizational culture and value systems. In order to be successful, companies must transmit a set of values that can be embraced at every level of the organization (Rhinesmith, 1993).

This model suggests that managers and organizational leaders' ability to increase the profitability of each employee is confounded by: changing management styles, shifting emphasis on employee rights, increased

workforce diversity, and changing employee value systems that may not be aligned with the value system of the organization.

Contribution to Knowledge in HRD

The scope of workforce diversity is enormous, covering all businesses and industries. The emphasis on managing diversity appears to be expanding as evidenced by the fact that 51 (68%) of the Fortune 250 companies participating in this study have appointed a department (or a portion of a department) to spearhead their workforce diversity initiative.

These findings, coupled with findings discussed in the review of literature, give rise to new and exciting implications in the area of workforce diversity programs. Individuals charged with the responsibility of implementing, funding, or enhancing current workforce diversity programs should gain valuable insights that will, hopefully, guide their efforts toward successful workforce diversity programs implementation.

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Diversity Practitioners—Learning From Experience! Defining the Role and Related Competencies in an Emerging Field of Practice.

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This paper provides a description of the process used to test the development and utility of a qualitative research model. The model was created as part of a doctoral dissertation, which explores the key experiences that represent the competency development process for diversity practitioners doing pioneering work in organizations. The paper argues that learning the requirements needed to perform in the role of diversity practitioner is a function of understanding the context, the relevant content, and the various processes associated with implementing diversity strategy.

Keywords: Diversity, Diversity Competencies, Diversity strategy

The dynamics of the new *global workspace* have resulted in the emergence of what some observers have called the *diversity industry* or the *diversity machine* (Judy & D'Amico, 1997; Lynch, 1997; Wheeler, 1995). Global markets with global corporations, producing global products and services by employees in global jobs characterize this emerging workspace. In addition, the projected diversification of the workforce, as both women and minorities enter the workplace in greater proportions, has fueled the rapid proliferation of many, often hastily prepared, diversity practitioners whose objective is to help organizations achieve the purported promise of diversity.

Problem Statement and Purpose

Problem Statement—Few comprehensive, well-structured studies on diversity practitioner competencies are present in the literature. Those reported tend to be part of research on broader diversity questions and issues. The emerging literature related to diversity is full of examples and models espousing linkages between productive diversity work climates and organizational effectiveness (Adler, 1986; Cox & Blake, 1991; Kanter, 1983; McLeod, Lobel, & Cox, 1991; Nemeth, 1985; Sandroff, 1988; Tannen, 1994, 1990; Triandis, Hall, & Ewen, 1965; Wright, Ferris, Hiller, & Kroll, 1995).

There is a growing body of literature presenting multiple perspectives for defining the meaning of diversity, as well as describing the various components of diversity in practice and related strategies for achieving its promise. In contrast, much of the literature that is available about diversity practitioners provide general categories with subjective descriptions of the practitioner's role. These categories are often based on quantitative survey research or the authors' conclusions drawn from actual experience (Baytos, 1995; Burkart, 1996; Carr-Ruffino, 1996; Cross, 1996; Gardenswartz & Rowe, 1993; Gant, 1996; Griggs & Louw, 1995; Wheeler, 1994, pp. 14-16).

Few of the authors writing about the role of diversity practitioners are explicit about the origins of their thinking, leaving the reader to accept their conclusions at face value. These general descriptions of qualifications and characteristics resulting from quantitative research or self-reports of practitioners provide a starting point for: (1) making selection and development decisions and (2) strategic planning and implementation; yet these descriptions lack the richness and detail that often result from qualitative, case study research.

Questions of quality control arise regarding the effectiveness of diversity practitioners, in part, because of the newness of the field. This researcher posits three additional explanations for quality control challenges in this emerging field of practice: (1) the role requirements are not clearly defined; (2) we don't specifically know what diversity practitioners' self-perceptions are or what they actually do in practice; and (3) there appears to be a lack of clarity as to why diversity practitioners engage in a given set of action strategies in terms of conceptual grounding.

Purpose Statement—This paper presents a research model that has been developed as part of dissertation study on diversity practitioners. The intent of the research model is to examine how the role requirements for diversity practitioners are evolving in practice; and to identify the competencies believed to be associated with effectiveness in the role.

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Research Question and Rationale

The core research question for the dissertation is:

> *What set of experiences reflect or represent the diversity practitioner's process of competency development? What are the resulting competencies?*

Given the context of the broader dissertation study, this paper responds to the question: *Can the research model presented identify the set of experiences that reflect the diversity practitioner's process of competency development?*

Rationale—Sixty-one percent of respondents to a Society for Human Resource Management survey indicated that diversity training is a "business necessity." This and other findings suggest that diversity training is increasingly becoming a part of the Human Resource Development (HRD) practitioner's responsibility. Just as the proposed benefits of workplace diversity initiatives are difficult to assess (especially quantitatively), so are the costs. One source estimates consulting fees ranging from $2,000 (per consultant for a one-day workshop) to well over $200,000 for a complete cultural assessment and diversity program (Lynch, 1997). These estimates do not include salaries and other expenses for internal personnel; nor the potential hidden costs associated with poor morale, conflict, and absenteeism that may result when diversity is not valued. The failure of an organization to create a productive diversity climate can also result in expensive litigation costs as a result of bias and discrimination claims.

Finally, there may be opportunity costs associated with diversity, for example a study of the Standard and Poors 500 Covenant Investment Management found that businesses committed to promoting diversity had an average annualized return on investment of 18.3 percent over a five-year period, compared with only 7.9 percent for those with the most shatter-proof glass ceilings (Recommendations of the Federal Glass Ceiling Commission, 1995, p.5). Diversity practitioners, both internal and external to the organization, often guide the design and implementation of diversity processes. It is this researcher's hope that the design of this study, and its findings, will make a positive contribution to Human Resource Development practitioners wishing to integrate diversity competence into their development platform.

Definitions of Terms and Key Concepts

Just what is a *diversity practitioner*? To answer this question, a number of terms and related concepts must be defined.

First, *What is the meaning of diversity*?—There are as many ways of defining this term as authors writing about the phenomenon. The literal meaning of diversity is the "condition of being different" (Webster). Taken in the context of the dynamic nature of human interaction, diversity can be defined as "unique mixtures characterized by similarities and differences" (Thomas, 1996). The *diversity as dimensions* framework provides a model for examining these unique mixtures of similarities and differences characteristic of human existence.

The primary dimensions of diversity encompass our inborn characteristics and other factors generally determined early in the life span. The elements (i.e., race, ethnicity, country of origin, gender, age, physical and mental ability, and sexual orientation) that make up the primary dimensions of diversity form an interdependent core of one's identity. People use these dimensions, often tacitly, when meeting others and determining "in-group" (others like us) and "out-group" (those who are different) status. *Secondary dimensions* of diversity can be viewed as mutable differences that we acquire, discard, and/or modify throughout our life-span and, as a result, are less salient to our core (e.g., education, occupation, income, parental status, etc.). *Organizational dimensions* of diversity resulting from our work roles are influenced by such factors as organizational level, classification (i.e., exempt, hourly, etc.), line of business, work content, location (e.g., corporate vs. field office), and union affiliation. The sum total of the three dimensions of diversity shape our identities as people, the frame or lens through which we view, experience, and act in the world. In short, diversity includes ALL OF US!

Second, *What is diversity in the workplace*?—Two watershed events served to place diversity on the radar screen in Corporate America. The first was the Hudson Institute's landmark study entitled "Workforce 2000: Work and Workers for the 21st Century" (Johnston & Packer, 1987) which highlighted a number of changes in America's workforce, mainly workplace demographics and a perceived "skills gap" between what a well-educated labor force needs to compete in a global economy and what skills they process.

The other was an article in The Wall Street Journal's Corporate Women column pointing out the invisible and impenetrable barrier between women and the executive suite, preventing them from reaching the highest levels of the business world regardless of their accomplishments and merits. Table 1 below presents five common organizational responses to diversity in the workplace.

Each approach differs along a number of key variables such as goals, motives, focus, benefits, and challenges. The primary driver for *Equal Employment Opportunity* (EEO) *and Affirmative Action* in organizations is legal compliance, therefore this approach focuses on racial and gender representation, in addition to other protected classes of employees, in all facets of employment. The *understanding differences* approach places its emphasis on interpersonal relationships across the various primary, secondary, and organizational dimensions of diversity.

The *valuing diversity* approach explores the extent to which a workforce composed of people with diverse, cultural backgrounds constitutes a valuable resource in helping corporations meet the demands of operating in today's global and multicultural business environment (Herbst, 1997). *Managing diversity* takes on a managerial perspective and focuses on the full utilization of the entire workforce regardless of difference. *Leveraging diversity* is a comprehensive strategy building on the previous four approaches. Leveraging diversity focuses on measuring the impact or outcomes of capitalizing on the talent of a diverse workforce (e.g., customer satisfaction ratings and successful penetration of diverse market segments).

Table 1
Organizational Approaches to Diversity in the Workplace

EEO & Affirmative Action	Understanding Differences	Valuing Diversity	Managing Diversity	Leveraging Diversity

Lastly, *What is a diversity practitioner*?—Each of the five approaches presented in Table 1 require movement within an organization at three levels; individual, group, and system. To varying degrees, each approach requires learning and change. First we must learn about the various cultural patterns that guide behavior in organizations and then we must work to change certain aspects of organizational culture to enhance effectiveness in inter-cultural and multi-cultural contexts. Diversity practitioners, while they differ in exact role requirements, work to assist organizations achieve their objectives by designing, developing, and implementing diversity interventions.

The Research Model and Analysis Process

The research model—this study applies a four-phase research process: (1) literature review and conceptual framework; (2) pre-interview data inventory/critical incident form sent to the study participants before the scheduled interview; (3) a 90-minute audio-taped semi-structured interview schedule; and (4) an emerging coding scheme/conceptual framework. I tested this model as part of the first round of my dissertation study with ten noted diversity "experts." *What constitutes a diversity expert?* In this study, an individual who contributes to and whose work is cited frequently in the literature on workplace diversity was considered an expert.

The diversity container framework—This framework (presented in Table 3) was used to transform the large volume of data in the literature on diversity into information. The result: (1) a catalog of the various ways diversity is defined in the literature; (2) descriptions of five approaches to addressing diversity in the workplace; and (3) content areas to explore using a pre-interview data inventory with "expert" research participants. The interview schedule applied during this study was designed to build on the findings from the literature review and pre-interview data inventory analysis by exploring the meaning practitioners (or experts) attribute to the experience of doing pioneering diversity work in organizations.

The expert interview schedule—Structured interviews were conducted in three parts: (1) Self-Q, that is soliciting questions that experts would ask internal diversity practitioners if they were conducting this study; (2) a series of open-ended questions about their role requirements as a diversity practitioner and the related competencies; and (3) reflective questions on the meaning the experts attribute to their diversity work (including generating two personal critical incident examples). The content and process of the expert interview schedule is presented in Table 2.

The analysis of the expert interview data—the process used to make meaning from the expert interview process included the following steps:

1. researcher review of interview transcripts (reading) with audio tape to ensure accuracy and to note follow-up clarifying questions;
2. research participants review of interview transcript and field notes (1st round member check);
3. researcher and participant address clarifying questions during follow-up telephone conversation;
4. researcher complete second pass noting emergent themes on margins of each transcript (focused on what Patton 1990, calls "indigenous concepts");
5. researcher complete third pass using the diversity container framework (compared literature with practice descriptions);
6. researcher use of Nudist qualitative research software to auto-code transcripts based on pre-interview data inventory demographics and sort transcripts by each key interview question from the structured interview guide (see Table 2); and
7. researcher develop case descriptions (or what Seidman, 1991 calls thematic presentations in third person descriptive style as suggested by Patton, 1990 & Merriam, 1988) for each participant (i.e., participant profile, definition of diversity, description of diversity approach including intended outcomes, and summary of key themes emerging from the critical incident segment) and distribute to each research participant for review and comment (2nd round member check).

Table 2
Expert Interview Schedule

Part 1: Questions	*Rationale/Probes*
It is evident that you are an expert on your own view of what constitutes success in this role. Therefore, to start, what I would like to do is have you ask yourself questions about the role of a successful diversity practitioner, the competencies needed to operate in the role, and how best to acquire such competencies. Please do not answer these questions, simply pose them as if you where interviewing someone else. While you are asking these questions, I will be recording verbatim and writing them down the best that I can capture them. If at any time you feel that you want to review what I have written, feel free to do so...Please, let's begin by asking the first question	Process Note: list the questions and review with participant; when the participant runs out of questions, inquire as to why this list of questions.
Part 2: Questions Q1. *How do you define diversity? Why?* Q.2. *What do you see as the primary role and related responsibilities of diversity practitioners? Why?* <u>Role</u> <u>Responsibilities and Tasks*</u> Q3. *What theoretical orientations or frameworks, if any, do you use to guide your practice* (interventions) *and why*? (content and premise reflection) Q4. *What specific skills, knowledge domains, and practices do you think successful diversity practitioners* (including yourself) *apply during their* (your) *work that have contributed to what you would consider to be exemplary diversity process outcomes in organizations* (i.e., competencies)? *Why?* Q5. *How do they (you) learn about the theory and practice of workplace diversity?*	*Rationale/Probes* Meaning the expert/practitioner attributes to the concept of diversity grounded in the belief that one's assumptions about the meaning of diversity will influence action strategies and approaches to the work. Engage the expert in context, content, & premise reflection (Mezirow, 1991). Understand the linkage between theory and practice (content and premise reflection) Content, conduct, and premise reflection. Direct questions about preparation and key experiences; how the learning is achieved in terms of strategy--formal, informal, intentional, or incidental; aim of learning)

Table 2 (continued)
Expert Interview Schedule

Part 3: Questions	*Rationale/Probes*
Q6. Now, I would like you to reflect on the meaning of your experience; that is, *What sense do you make of the experience of doing diversity work?*	Meaning making/learning from experience/reflecting on experience
Q7. *Given what you have said about the role of diversity practitioners, and the related competencies; where do you see yourself going in the future with this work and why?*	Forecasting on the future direction of diversity work/related requirements/implications for future competencies.
Q8. *Can you think of any "ah ha" experiences that caused you to rethink elements of your practice? If so, what are they? Why critical? Impact on practice?*	Learning from experience
Q9. *What are some examples of what you would consider exemplary practice in your experience* (or others) *as a diversity practitioner?*	Probes: What was the situation? Trigger? Intent or desired outcome? Hopes? Players? What was your role? Strategies/tactics? Actions? Why? Thoughts? Feelings? High-point? Low point? Outcomes? Results? Measure? Compare to initial intent? Have your views about what's important in diversity work changed as a result of this experience? About what constitutes effective practice? What would you do different next time, if anything? Why? What were your learnings as a result of this experience? What advice would you give to someone facing a similar situation?)

After completing this process with four expert participants (i.e., analysis steps 1-7), I conducted an inter-rater reliability session with two other colleagues in my dissertation cohort. A preliminary coding scheme for the study resulted from this process (see Table 5 and Table 6). This process resulted in the creation of an analytic framework to apply during the balance of the study presented in the preliminary findings segment of this article. This researcher claims the preliminary results are trustworthy based on design features such as (1) multiple round member check strategy; (2) triangulation of the data including primary source interviews, researcher observation, comparing themes emerging from primary sources with secondary sources; and (3) colleague inter-rater sessions.

Theoretical Foundation

This researcher's paradigmatic assumptions align with constructivism, that is a belief that the meaning of diversity is a human construction (Lincoln, 1990, pp. 67-87). This paradigm assumes that "what is known" about diversity or its reality, "exist in the form of multiple mental constructions, socially and experientially based, local and specific, dependent for their form and content on the persons who hold them" (Guba, 1990, p. 27). This implies in order to understand the requirements and related competencies associated with the role of the diversity practitioner the researcher (or inquirer) must interact directly with the participants (or the inquired) to co-create meaning. For this reason, a number of the diversity "experts" found in the literature were requested to participate in the first phase of the study.

The diversity container brings together three philosophical schools of thought in analyzing the performance and role of diversity practitioners including (1) structuralism or *context;* (2) phenomenology, or *content;* and (3) behavioralism, or *conduct* (Jackson, 1991, p. 38). In addition, the container was used to develop data collection and analysis tools. Table 3 presents the seven core questions that make up the diversity container.

Context—Placing the concept in a historical context can enhance our understanding of the diversity movement as a phenomenon. As demonstrated in Table 4, the evolution from *Affirmative Action* (AA) to *Workplace Diversity* can be positioned as representing a paradigm shift in our thinking about, and reacting to, a variety of individual

differences in this country over the span of four decades (Baytos, 1995; Carr-Ruffiono, 1996; Cox, 1993; Gardenswartz & Rowe, 1994, & 1993; Griggs & Louw, 1997; and Thomas, 1996).

Content—Surveying a number of the definitions of diversity in the literature, as well as those generated by this research, one of two components, or both, are embedded in the various ways of expressing the meaning of the concept: (1) as a *dimension* (or group of dimensions); and (2) as an *action* or *process* (i.e. acknowledging, understanding, and valuing differences; effectively managing and leveraging differences). In short, both theorists and practitioners conceptualize diversity as a *subject* (the "what") and/or a *verb* (the "how") capturing both static characteristics as well as dynamic processes.

Table 3: The Diversity Container
Critical Literature Review: Core Exploration Questions

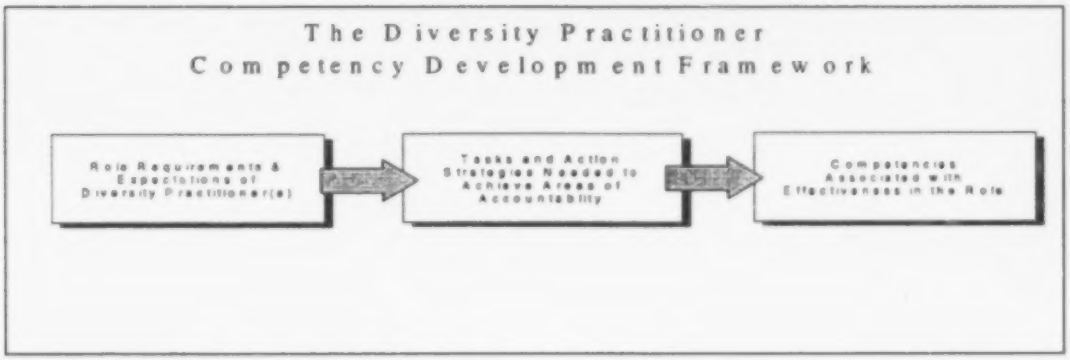
Element	**Context** *(The "Where & When" in time, place, & history; & Why)*	**Content** *("The What")*	**Conduct** *(The "How")*
Philosophy	Structuralism	Phenomenology	Behavioralism
Focal Questions	*Q.1: Why bother? What's the basic premise for diversity work?* *Q. 2:How do theorists and practitioners position the "business case" for diversity?* *Q. 3: What historical origins influence an author's thinking regarding diversity in the United States?*	*Q. 4: How are theorists and practitioners defining diversity?* *Q. 5: What are the key models or conceptual frameworks used to guide professional practice?*	*Q. 6: What resources or interventions are recommended by theorists and practitioners to do diversity work* (i.e., how do they translate theory into practice)?
Q. 7: How do theorists and practitioners define success (i.e., what are the expected results or outcomes)?			

Table 4: The Evolution of the Diversity Movement
Four Decades of Change

1960s	1970s	1980s	1990s
Era of Civil Unrest & Social Action	*Era of Affirmative Action & Tension*	*Era of Inclusion*	*Era of Cultural Transformation*

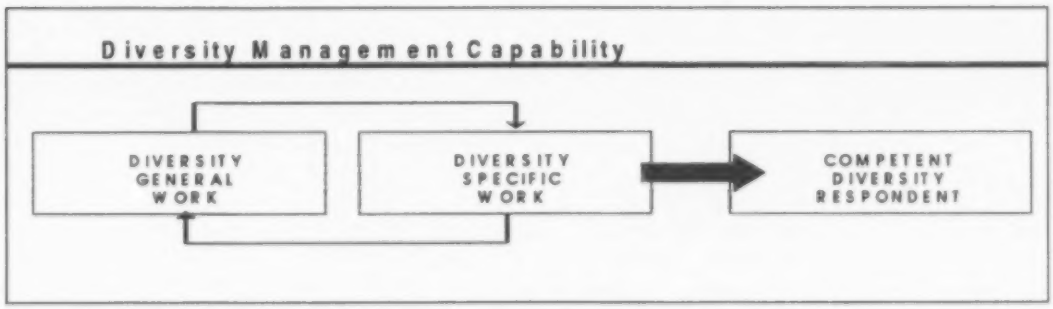
Conduct—Contextual and content elements of the diversity container frame the nature and form of the actions taken by diversity practitioners in the service of achieving workplace diversity objectives. The Diversity Practitioners Competency Development Framework below graphically demonstrates the approach applied in this study to gain an understanding of the process used for clarifying role-related competencies. The interview guide presented in Table 2 was designed by combining the three elements of the diversity container with the competency development framework. The collective insights gained by applying the diversity container resulted in the following working definition for the competency development process for diversity practitioners.

The process of learning, grounded in experience, that contributes to the diversity practitioner's ability to develop effective responses to the challenges, complexity, and opportunities associated with the role.


The Diversity Practitioner
Competency Development Framework
Role Requirements & Expectations of Diversity Practitioner(s)
Tasks and Action Strategies Needed to Achieve Areas of Accountability
Competencies Associated with Effectiveness in the Role

Preliminary Findings

The key preliminary finding emerging from this study is that the learning agenda for the development of a managing diversity capability involves a continuous interplay between diversity-general work and diversity-specific work (Hayles & Russell, 1997, p. 129; Hayles 1997-98; Thomas, 1996). Diversity-general work focuses on providing a context for diversity-specific work. In this way, diversity-general work builds the foundation needed to achieve the desired outcomes of any diversity-specific intervention. The ultimate aim of cycling back and forth between diversity-general and diversity-specific activities is to develop the capacity to construct competent responses to the challenges, complexity, and opportunities associated with situations involving diversity.



Diversity-General Work—Diversity-general work provides a foundation for a comprehensive diversity strategy and change process. In other words, this work should be a requirement for any diversity initiative or intervention. While necessary, diversity-general work is not sufficient for the organizational and cultural change needed to transform the complexity, conflict, and tension often associated with situations involving diversity to a source a competitive advantage. The activities associated with diversity-general work can be grouped into six clusters as displayed in Table 5. This insight resulted in a framework for analyzing the expert and later the internal diversity practitioner interview data.

First, conceptual clarity answers the question—*What is diversity?* Contextual awareness situates the diversity movement in its historical context and examines how various socioeconomic trends have placed diversity on the social, political, and organizational agenda in United States. In this way, contextual awareness work answers the "where, when," and to some degree the "why" of diversity.

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To achieve sustainable change both the business case for diversity and one's personal rationale for engaging in the diversity management process must be clarified. There are a number of relevant models and theories which serve as guideposts to effectively applying diversity management in organizations (i.e., theoretical basis) that are part of the foundation of developing a managing diversity capability.

Foundational knowledge and skill go beyond defining diversity to working to understand and apply a set of basic concepts for influencing human behavior in organizations—the essence of diversity work. Finally diversity is not a spectator sport—it requires personal engagement. For this reason, a key element of diversity-general work is self-awareness.

Diversity-Specific Work—A key challenge for a practitioner during the early phases of the diversity management process is deciding where to start. There is often confusion around the need to position diversity inclusively and the complexity associated with trying to effectively address the multiple dimensions of diversity at once. What is clear is that if a practitioner or an organization were to attempt to address the infinite number of differences characteristic of human existence, very little, if any sustainable change would occur. In fact, most people (and organizations) would to get lost in the complexity. For this reason, after building a foundation with diversity-general work, it is necessary to then select one or more dimensions of diversity to apply the learning. That is, transform that learning into action. Table 6 presents the analytical tool that will be used to assess diversity-specific work in organizations.

Table 5: Six Clusters of Diversity-General Work in Organizations

Clusters	*Cognitive Domain* (Knowledge Areas—Head Work)	Behavioral Domain (Skill Areas—Hand Work)	Affective Domain (Attributes—Heart work)
Contextual Awareness	e.g., historical origins of dive movement	e.g., transforming practices, systems, & structures	e.g., accepts political realities of change agent
Conceptual Clarity	e.g., various definitions of diversity; classification schemes	e.g., argument skills—justifying, analyzing, & constructing positions	e.g., personal work around how prejudice and other assumptions impact the work
Business Connection/Case	e.g., macro-economic trends/understanding drivers	e.g., strategy development, measuring the impact	e.g., long term perspective
Theoretical Basis	e.g., Bennet's Developmental Model of Intercultural Sensitivity; Organization Behavior	e.g., administering, analyzing, and providing IDI feedback	e.g., constant pursuit to clarify one's philosophical orientation regarding diversity work
Foundational Knowledge and Skills	e.g., Workplace Diversity Process; OD; OT; and Adult Learning Theory.	e.g, diagnostic skills—applying FK during CAs, ORAs, TNAs, etc.	e.g., reflective practitioner, continuous learning/ balance challenge & support
Self-awareness and Self-work	e.g., learning style, facilitation style, consulting style, life history	e.g., administer & interpret various self-awareness instru.s	e.g., viewing self as instrument of change

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Table 6: Diversity-Specific Work in Organizations			
Clusters	*Cognitive Domain* (Knowledge Areas—Head Work)	Behavioral Domain (Skill Areas—Hand Work)	Affective Domain (Attributes—Heart work)
Intercultural Communications/ Relations (interactions bet. 2 cultures)			
Multicultural Work (greater than two cultures)			
Gender Diversity			
Ethnicity/Racism			
Physical/Mental Ability			
Sexual Orientation			
Age/Generational Diversity			
Acquisitions and mergers			
Functional Diversity in Organizations			
Lines of Business/Product Lines			
Union/non-union Membership			
Globalism			
Market Diversity			

Summary

While the results are preliminary, the early findings emerging from this Diversity Practitioner Competency Study support the utility of the qualitative case study research model to examine a sample of acting participants in this emerging field of practice. The results from the expert sample align heavily on the diversity-general side of the two dimension analytical framework presented in the preliminary findings section of this article. Early analysis using transcripts from the "internal practitioner" sample appears to provide more details on the diversity-specific side of the framework, this may be due to, in part, the specific, and task oriented nature of internal practitioners. The experts in this study are authors, consultants, and advisors to internal practitioners.

The methodology described herein, and the process in which conference attendees assigned to this symposium will participate, will make a strong contribution to the trustworthiness of the broader dissertation study on Diversity Practitioner Competencies.

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How Action Learning Builds the Learning Organization: A Conceptual Analysis

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Keywords: Action Learning; Learning Organization; Organizational Learning

Marquardt and Carter (1998) observe that "perhaps action learning's most useful role is in creating learning organizations. Revans (1982) states that "the most precious asset of any organization is the one most readily overlooked -- its capacity to build on lived experience, to learn from challenges and to turn in a better performance by inviting all and sundry to work out for themselves what that performance might be" (p. 286).

Senge (1990) states that a learning organization must be able to integrate work with learning, that only through continuously reflecting on our activities can we become a learning organization. As Revans (1982) notes, action learning creates constant learning opportunities for people. It creates a culture and morale for learning.

Perhaps no tool is more effective in building a learning organization than action learning. Lex Dilworth (1995) has called action learning "the DNA of a learning organization" since action learning both enables and forces organizations to continuously learn on an organization-wide basis and thereby be better able to adapt to the continuously changing environment.

Keys (1994) remarks that "action learning is a truly unique organizational learning process that is growing in acceptance. Although originally designed as a managerial learning process, it offers excellent opportunities for promoting strategic organizational learning. Two significant events are occurring within action learning groups that help to create learning organizations:

1. Team members are resolving problems, the solutions to which are passed to clients and are themselves learning processes and relevant information valuable for future problem-solving episodes

2. The body of institutional knowledge and the pace of institutional learning is accelerating in user organizations

There are many elements of action learning that contribute to the building of a learning organization. Action learning:

- is outcome oriented
- is designed to systematically transfer knowledge throughout the organization
- enables people to learn by doing
- helps develop learning how to learn skills
- encourages continual learning
- creates a learning culture; learning becomes a way of life
- is an active rather than a passive approach
- is done mainly on the job rather than off the job
- allows for mistakes and experimentation
- develops skills of critical reflection and reframing
- is a mechanism for developing learning skills and behavior
- demonstrates the benefits of organizational learning
- models working and learning simultaneously
- is problem-focused rather than hierarchically bound
- provides network for sharing, supporting, giving feedback and challenging assumptions
- develops ability to generate information
- breaks down barriers between people and across traditional organizational boundaries
- helps an organization move from a culture of training (in which someone else determines and provides your development) to a culture of learning (everyone is responsible for their own continuous learning)
- is systems-based

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- applies learnings to other parts of the organization as appropriate (Marquardt and Reynolds, 1994; Marquardt, 1997; Marquardt, 1998)

Four Subsystems of the Learning Organization

Each of these characteristics is part and parcel of the systems approach of viewing a learning organization. In this systems learning organization model, there are four subsystems (1) learning dynamics, (2) organization renewal, (3) people empowerment, and (4) knowledge management) that interface and support one another, all of which are strengthened via action learning (Marquardt, 1996)

Learning Subsystem

The learning subsystem refers to (a) levels of learning, (b) types of learning and (c) learning skills.

Levels of Learning

There are three levels of learning present in learning organizations:

Individual learning refers to the change of skills, insights, knowledge, attitudes and values acquired by a person through self-study, technology-based instruction, and observation.

Group or team learning alludes to the increase in knowledge, skills and competency that is accomplished by and within groups.

Organization learning represents the enhanced intellectual and productive capability gained through corporate-wide commitment and opportunity to continuous improvement. It differs from individual and group/team learning in two basic respects. First, organizational learning occurs through the shared insights, knowledge and mental models of members of the organization. Second, organizational learning builds on past knowledge and experience, on organizational memory that depends on institutional mechanisms (e.g., policies, strategies, and explicit models) used to retain knowledge.

Types of Learning

There are several types or ways of learning that are of significance and value to the learning organization. Although each type is distinctive, there is often overlap and complementarity of the various types. Therefore, a particular learning occurrence may be classified as being of more than one type.

Adaptive learning is learning from the experience and reflection.

Anticipatory learning is the process of acquiring knowledge from expecting the future (a vision-action-reflection approach) whereas **generative learning** is the learning that is created from reflection, analysis or creativity.

Single-loop, double loop and deutero learning are types of learning are differentiated by the degree of reflection placed on action that has occurred in the organization.

Skills of Organizational Learning

Four key skills are needed to initiate and maximize organizational learning, namely,

Systems thinking which represents a conceptual framework one uses to make full patterns clearer, and to help one see how to change them effectively

Mental models are the deeply ingrained assumptions that influence how we understand the world and how we take action. For example, our mental model or image of learning or work or patriotism impacts how we relate and act in situations where those concepts are operating.

Personal mastery indicates the high level of proficiency in a subject or skill area. It requires a commitment to lifelong learning so as to develop an expertise or special, enjoyed proficiency in whatever one does in the organization

Dialogue denotes the high-level of listening and communication between people. It requires the free and creative exploration of subtle issues, a deep listening to one another and suspending of one's own views. The discipline of dialogue involves learning how to recognize the patterns of interaction in teams that promote or undermine learning. For example, the patterns of defensiveness are often deeply ingrained in how a group of people or an organization operates. If unrecognized or avoided, they undermine learning. If recognized and surfaced creatively, they can actually accelerate learning. Dialogue is the critical medium for connecting, inventing and coordinating learning and action in the workplace.

How Action Learning Builds the Learning Subsystem

Action learning programs encourage and enable significant levels of learning to occur at the team and individual levels during the action learning sets. Perhaps, there is no greater demonstration of true team learning that what occurs during such set meetings where the entire group is developing common basic assumptions, common understanding of the problem and common growth in developing new knowledge. Usually, at the end of the action learning meeting, the set seeks to identify ways in which its learning can be applied to the organization and thereby create organization-wide learning.

All types of learning are sought and developed in action learning programs. In reflecting on past actions, the group attempts to adapt the new action to better respond to the environment. Anticipatory learning is acquired through the group's analysis of a variety of possible future scenarios or impacts of various actions. Almost continuously, action learning sets are generating innovative, new creative knowledge. Finally, the time and space provided for deep and frequent reflection during the action learning sets provides the avenue for single, double, and even deutero learning.

Action learning provides the opportunity for people in the organization to build each of these learning disciplines. In action learning sets we can reflect on our actions and the assumptions that underlie them. Action learning promotes "a depth and intensity of dialogue that is uncommon in the normal life experience." (Dilworth, 1998).

Revans (1982) notes that it is the "social dimension of action learning that provides the challenge to misconceptions and ingrained mental schemata which predispose a person to overlook the ways in which he/she needs to change." In action learning we can explore real problems in a non-defensive way with supportive colleagues who feel free to criticize, question and advise. Inherent in this approach is the ability to acknowledge that we frequently act in ways that may be incongruent with what we espouse.

Organization Subsystem

The second subsystem of a learning organization is the organization itself, the setting and body in which the learning itself occurs. The four key dimensions or components of this subsystem are vision, culture, strategy, and structure

Culture refers to the values, beliefs, practices, rituals and customs of an organization. It helps to shape behavior and to fashion perceptions. In a learning organization, the corporate culture is one in which learning is recognized as absolutely critical for business success, where learning has become a habit and an integrated part of all organizational functions. This rich adaptable culture creates integrated relationships and enhances learning by encouraging values such as teamwork, self-management, empowerment and sharing. It is the opposite of a closed, rigid, bureaucratic architecture. Risks are encouraged and past methods are to be challenged.

Vision captures a company's hopes, goals, and direction for the future. It is the image of the organization that is transmitted inside and outside the organization. In a learning organization it depicts and portrays the desired future picture of the company in which learning and learners create continuously new and improving products and services. A shared company vision is one that fosters genuine commitment and enrollment rather than compliance.

Strategy relates to the action plans, methodologies, tactics and steps that are employed to reach a company's vision and goals. In a learning organization, these are strategies that optimize the learning acquired, transferred and utilized in all company actions and operations.

Structure includes the departments, levels, and configurations of the company. A learning organization is a streamlined, flat, boundaryless structure that maximizes contact, information flow, local responsibility and collaboration within and outside the organization.

How Action Learning Builds the Organization Subsystem

The culture created in action learning programs is one where learning is the most important and valuable objective. Throughout the action learning process there is an emphasis on how the group can continue to expand upon and speed up their knowledge and learning capacities. Members are encouraged and expected to take risks and try new ways. They recognize that much of the greatest leaps in learning have come from learning from mistakes made.

Garratt (1991) remarks how action learning is particularly valuable in helping organizations develop a vision and culture committed to continuous learning. Schein (1993), a pioneer in understanding organizational culture and organizational change, notes that "for change (learning) to occur, the organization must unlearn previous beliefs, be open to new inputs and relearn new assumptions and behaviors." Action learning is a powerful tool in helping to change these values and create these new visions.

Action learning organizations have a bias for reflection-in-action. The capacity to quickly take action and to generate information is critical to organizations. Senge (1990) observes that "learning cannot exist apart from action. Action provides a basis for the critical dimension of reflection." It is the expressed strategy of an action learning program to build in time, space and opportunities for learning. And no strategy is more powerful for producing organization-wide learning than getting large numbers of employees involved in action learning programs.

The structure of an action learning set is very fluid and flexible. Keeping the flow of questions and knowledge as clear and complete as possible is critical in processes such as reframing the problem, identifying possible actions, and providing frank feedback to one another. Needless protocol and bureaucracy and administrivia are discouraged. Leadership flows easily throughout the group.

People Subsystem

The people subsystem of the learning organization includes employees, managers/leaders, customers, business partners (suppliers, vendors, and sub-contractors) and the community itself. Each of these groups is valuable to the learning organization, and all need to be empowered and enabled to learn.

Employees as learners are empowered and expected to learn, to plan for their future competencies, to take action and risks, and to take the initiative to solve problems. In learning organizations, they should be treated as mature, adult learners and be given authority and responsibility according to their learning capacities.

Managers/Leaders as learners carry out coaching, mentoring, and modeling roles with a primary responsibility of generating and enhancing learning opportunities for people around them. In addition to managing people, they should become proficient at managing knowledge. Revans (1980) once remarked, "encouraging autonomous learning is not managerial abdication." And finally, leaders should become champions of learning projects, including action learning programs

Customers can be a valuable source of information and ideas. They should thus be closely linked into the learning system and strategy of the organization. When possible, they should be offered training so as to become wiser customers and better able to advise relative to their future expectations from the company.

Partners, suppliers, and dealers as learners can receive and contribute to instructional programs. They can also benefit by sharing competencies and knowledge with the organization. Learning from and with suppliers, dealers, and partners should be a regular strategy of learning organizations.

Community groups as learners include social, educational and economic agencies that can share in the providing and receiving of learning. Involving the potential diversity of all these groups enhances product and service development.

How Action Learning Builds the People Subsystem

Action learning recognizes the importance of involving people from throughout the business chain in the problem-solving process. Action learning sets are most effective when customers, suppliers, and interested community members come together to ask fresh questions and share fresh perspectives.

Empowering people to take responsibility for themselves rather than waiting for outside expertise is a key value of action learning. Limerick et al. (1994) point out that there is within action learning programs "the explicit recognition that management's role is to provide continuous opportunities for employees' self-development."

Pedler (1991) notes that in learning organizations, a primary task of managers is to facilitate the staff's learning from experience. Through the experience of action learning, managers will recognize the importance of making time for seeking feedback, for obtaining data from a variety of perspectives, for encouraging new actions for old and new problems. They will also perceive the value in questioning their own ideas, basic assumptions, attitudes and actions.

Building learning alliances help organizations to achieve continuous improvement and develop the capacity to cope with discontinuous change. Learning from fresh faces is critical for success in action learning as it is in organizations. New partner and perspectives can:

- enlarge the range of the continuous environmental scanning ability of those in the alliance
- bring a wide analytical range, and a wider range of assumptions to the learning process, so that discontinuities are more likely to be recognized
- help member recognize and overcome defensive routines so that they can be more transcendent.
- take place at multiple levels within the alliance, and improve the learning of all members
- open up the boundaries of the organization, and make possible completely new organizational forms, constantly open to importing chaos and evolving new forms of order (Limerick et al., p. 36)

The origins of action learning can be traced to the creation of a learning alliance among colliery managers in Britain following nationalization of the British coal industry. Revans describes how he established a group of 22 managers, drawn from pits in England and Wales, to work together over 3 years on problems they identified as critical to their operations. Revans also developed alliances between medical professionals across a number of London hospitals and will as a learning community through a consortium of leading industrial organizations in Belgium

Knowledge Subsystem

The knowledge subsystem of a learning organization refers to the management of acquired and generated knowledge of the organization. It includes the acquisition, creation, storage, transfer and utilization of knowledge.

> **Acquisition** refers to the collection of existing data and information from within and outside the organization via benchmarking, conferences, environmental scans, Internet, use of consultants, publications, and research
>
> **Creation** involves new knowledge that is created within the organization through problem solving and insights as well as the conversion of tacit and explicit knowledge. Experimentation, demonstration projects, and reflecting on past and current programs increase the innovativeness of the company.
>
> **Storage** is the coding and preserving of the organization's valued knowledge for easy access by any staff member, at any time, and from anywhere. The knowledge should be categorized according to learning needs, work objective, user expertise, and function. It needs to be structured and stored so that it can be found and delivered quickly and accurately.
>
> **Transfer and utilization** includes the mechanical, electronic and interpersonal movement of information and knowledge, both intentionally and unintentionally, throughout the organization as well as its application and use by members of the organization.

The knowledge elements of organizational learning are ongoing and interactive instead of sequential and independent. The collection and distribution of information occurs through multiple channels, each having different time frames. An example is an on-line newsletter, which systematically gathers, organizes, and disseminates the collective knowledge of the organization's members.

Technology is needed to quickly and adequately implement all four stages of the knowledge management. Technology includes the supporting, integrated technological networks and information tools that allow access to and exchange of information and learning. It includes technical processes, systems, and structure for collaboration, coaching, coordination, and other knowledge skills. It encompasses electronic tools and advanced methods for learning, such as computer conferencing, simulation, and computer supported collaboration. All these tools work to create knowledge freeways. Good knowledge management is not possible with the use of technology.

How Action Learning Builds the Knowledge Subsystem

Acquiring Knowledge: Action learning organizations are information-rich. In action learning sets members recognize the importance of acquiring information not only from external resources but also the value of tapping the tacit, internal wisdom and experience of each other. The internal networks developed in action learning sets heighten the awareness of organizational resources, facilitate exchanging and sharing of ideas, and generates knowledge.

Creating Knowledge: Participants in action learning programs understand that they should seek new ways of solving old problems, that the old knowledge may no longer be sufficient. Thus, members are constantly creating new knowledge and to encourage innovation within the set. Nonaka (1994) suggests that information creation is a fundamental requirement for the self-renewing (i.e., learning) organization. An autonomous self-organizing group begins to be realized when members are given the freedom to combine thought and action at their own discretion and are thereby able to guarantee the unity of knowledge and action. The actions of action learning clarify and generate meanings.

Storing Knowledge: Knowing knowledge to store and why is based upon the organization's ability to make sense of the data encompassing and surrounding it. The company must then develop sense-making categories for coding and retaining value-added knowledge. Through its ongoing reflection on learning and the knowledge acquired, action learning programs lends themselves well to the Kantian school of thinking which "positions sense-making above mere sensing" (Botham and Vick, 1998). By reflecting on action, the set develops the ability to "make meaning" of the data collected and stored.

Transferring and Testing Knowledge: During the reflection periods, self-learnings become more explicit and intentional. Set members capture and store for themselves the knowledge and wisdom that will help them become better in both their professional and personal lives. Finally, action learning groups continuously seek ways in which they can transfer the learnings, wisdom, and experience gained in resolving the set's problem(s) to the organizations and communities in which they work.

Action Learning – The Cornerstone of a Learning Organization

Learning quickly and systematically is critical for surviving in the 21st century. The organization that makes learning its core business can rapidly leverage its new knowledge into new products, new marketing strategies, and new ways of doing business. Learning organizations will become the only place where global success is possible, where quality is more assured, and where energetic and talented people want to be. More and more organizations are seeing action learning as the vehicle to help them become learning organizations and to arrive safe and well into the next century.

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Enhancing Individual and Organizational Learning: A Sociological Model

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A theoretical model of organizational learning is proposed to integrate and address the learning needs of individuals and organizations. This model, based on the sociological work of Talcott Parsons, definesorganizational learning as a dynamic process of knowledge creation. Implications for human resourcedevelopment in organizations are explored.

Keywords: Organizational Learning, Social Learning theory, Adult Learning

Individual learning in organizations is seen as a critical factor in an organization's capacity to change and survive over time (Nonaka, 1994; Senge, 1990). Major shifts in internal and external organizational environments impact learning at all levels. These shifts are frequent, diverse, sometimes unpredictable and, at other times, planned. For example, a large number of tenured administrators may leave a firm as a result of a merger and the organizations involved may lose valuable knowledge and expertise. Mergers or acquisitions also require all staff to learn and understand the mission, culture, policies, and products of the newly created organization.

Formal training and education are traditionally two of the organizational strategies of choice to attempt to adapt to environmental jolts. Human resource development (HRD) professionals in organizations have relied upon adult learning theories (Knowles, 1990) and training design (Nadler, 1982) to guide the development of learning activities for staff adapting to changing workplaces. Despite our current knowledge in HRD, learning outcomes are frequently uneven, unpredictable and often temporary. Although the influence of the workplace is acknowledged and incorporated in much of this literature and links are made to organizational learning (Marsick & Watkins, 1990), the focus has remained on individuals learning in organizations.

Organizational learning has also been proposed as critical to organizational survival particularly in times of rapid and revolutionary environmental changes. For over 40 years, theoretical models of organizational learning have been proposed and numerous typologies developed, yet it has only been in the past decade that empirical research has been conducted. Organizational learning has alternately been defined as adaptation and behavioral change or as a process of knowledge creation (Glynn, Milliken & Lant, 1994). The focus of many of these models has been on individual learning while others have focused only on organizational level learning yet rarely do either draw upon the work in adult learning.

This paper links the literature on organizational learning and adult learning and proposes a sociological model of organizational learning or knowledge creation for HRD professionals to use as a guide to meeting the learning needs of individuals and organizations. Maximizing all forms of learning or knowledge creation, whether individual or collective, formal or informal, may be the most effective strategy to assure individual and organizational effectiveness over time.

Theoretical Foundations and Definitions of Learning

Adult Learning

One of the basic assumptions of this paper is that both the process and outcomes of individual learning are inherently social. As early as 1926, Lindeman, one of the founders of the adult education movement, noted "we can progress not by giving attention to either organism or environment but to both and in relation to each other (p. 49). This interrelationship between the learner and the environment has been a continuing theme in adult education. Jarvis (1987) states that "learning is not just a psychological process but is intimately related to that world and affected by it...people take on the knowledge, values, beliefs, and attitudes of the society in which we live" (p. 11). This society may be the larger society in "which we live" as well as the society or culture of the organizations in which we work and spend most of our lives. The discussion of learning in this paper centers on learning in the workplace.

Not only are individuals and organizations part of interconnected learning systems, the knowledge and skills to be learned are social products (Chene, 1983). The new knowledge to be learned in a medical setting or manufacturing company may be created by university research centers or the professions in which people are

employed. How this knowledge is used on the job is frequently socially influenced by the work group in which someone lives.

This paper will draw on Marsick and Watkins' (1990) definition of learning as the way "in which individuals or groups acquire, interpret, reorganize, change or assimilate a related cluster of information, skills and feelings. It is also primary to the way in which people construct meaning in their personal and shared organizational lives" (p. 4). From this definition, Marsick and Watkins (1990) propose three types of learning that may take place in organizations.

Formal Learning

Traditionally individual learning in organizations is seen as an outcome of formal training and development programs in classrooms away from the actual work site. Formal training and education have been the mainstay of staff development in organizations.

Informal Learning

It is predicted that approximately 83% (Marsick & Watkins, 1990) to 90% (Sorohan, 1993) of the learning in organizations occurs through interaction in our day-to-day work through informal and incidental learning. There is a mixture of definitions of informal learning some equating it to unintentional learning while others relate it to autonomy (Garrick, 1998). This paper will use Marsick and Watkins' (1990) definition i.e. it is usually learning that "may include incidental learning and occur in institutions but is not typically classroom based or highly structured and control of the learning rests in the hands of the learner" (p. 12).

Incidental Learning

Marsick and Watkins (1990) define incidental learning as a "byproduct of some other activity such as task accomplishment, interpersonal interaction, sensing the organizational culture or trial and error experimentation" (p. 7). It can occur in organizations when individuals learn about the organizational culture by the way a needs assessment is conducted, or performance is assessed and rewarded. Frequently organizational members' learning is more powerfully shaped by the technical systems, policies, and processes in the organization than by more formal attempts to produce learning outcomes.

Despite the emphasis on individual or adult learning as a social process with social products or outcomes, the theoretical underpinnings of the work on adult learning are primarily focused on the individual and based in disciplines such as psychology and education. In organizations as well the emphasis remains on learning at the individual level with individual development plans as well as assessments of individuals' skills and abilities.

Organizational Learning

Similar to individual learning, definitions of organizational learning are numerous, multiple theoretical models have been proposed, typologies have been delineated (Shrivastava, 1983), and factors thought to influence the process of organizational learning have been identified and discussed (Huber 1991; Hedberg, 1981; Miner & Mezias, 1996). The construct of organizational learning emerged approximately 40 years ago with the work of Dearborn and Simon (1958). In several ways the organizational learning literature has paralleled the research and thought on individual learning beginning with more stimulus-response models and moving to information processing or knowledge creation perspectives. The two primary frameworks that emerge from the literature on organizational learning are behavior change (adaptation) and cognition (knowledge creation) (Glynn, Milliken, & Lant, 1994). Underlying the definitions of organizational learning in these frameworks are varying assumptions regarding learning.

The organizational learning theories of knowledge creation focus on the process of how knowledge is created, stored and transmitted while the adaptation theories evolve from the stimulus-response concepts of learning and describe how organizations change based on their experience (March & Olsen, 1976; Levitt & March, 1988; Fiol & Lyles, 1985). In most theories, knowledge creation is viewed as a social process (Duncan & Weiss, 1979; Schwandt, 1997) that is dependent on shared assumptions or frameworks for communication in organizations.

A similar and sometimes overlapping body of literature has developed under the general framework of knowledge creation in organizations. Many models of knowledge creation are based on theories of individual knowledge yet maintain that knowledge creation is a social process (Nonaka, 1994; Schwandt, 1997). Although knowledge is argued to be "...the property of individuals a great deal of knowledge is both produced and held collectively (Brown & Duguid, 1998, p. 90). Another commonality in the knowledge creation literature is the distinction between knowledge that is learned through experience and knowledge that is transmitted through other

means. This more tacit or procedural knowledge, the "know how" referred to by Brown and Duguid (1998) is usually learned through interaction with others (Kogut & Zander, 1996) in environments such as communities of practice (Brown & Duguid, 1998).

Summary

The definitions of learning discussed above focus on action as well as cognition. The implied outcomes of individual and organizational learning are change or to increase the adaptive capacity to survive through the creation of knowledge. The theoretical base for learning in organizations has been primarily individual learning theories. This paper proposes the sociological work of Talcott Parsons as a theoretical base for learning interventions in organizations. Using Talcott Parsons' (1951) general theory of action as a framework, individuals and organizations can be viewed as learning systems with similar required functions and learning needs arising to facilitate these functions. Marsick and Watkins' (1990) work is used to further expand this framework. In this paper, learning needs and strategies to fulfill them are discussed in the context of this model and its functions and subsystems.

Parsons' Theory of Action

Parsons theorized that the collective (organization) is an amalgamation of actors, objects, and norms and is characterized by social phenomena that are more than just the sum of individual behaviors and attitudes of the individual actors. It is characterized as interrelated systems of actions emerging from various levels of analysis i.e. individual, group and organization. Parsons' systems theory of action suggests that both performance and learning processes have the capacity to change or disrupt the equilibrium in the organization-situation relationship. However, change in a "social system" itself occurs through the learning process, not just the performance process (Schwandt, 1995).

The focus of Parsons' general theory of action is the establishment of a systematic relationship between the "actions" of the members of the social system (actors) and their collective ability to adapt to both inside and outside environments. Parsons describes four sets of actions as generic functional prerequisites of a system in response to critical issues associated with survival. Each subsystem of action carries out one of the four prerequisite functions necessary for the survival of the total system (Schwandt, 1997). The four functional prerequisites are:

> Adaptation is the complex of unit-acts which serves to establish relations between the system and its external environment…consists of taking diverse resources needed by the system for the environing systems, in exchange for products originating within the system itself" (Rocher, 1975, p. 41).
>
> Goal attainment is "all actions which serve to define the goals of the system to mobilize and manage resources and efforts to attain goals and gratification" (Rocher, 1975, p. 42)
>
> Integration is to "establish control, to inhibit deviant tendencies, to maintain coordination between parts, and to avoid too serious disturbances" (Rocher, 1975, p. 42)
>
> Latency or pattern maintenance is the "point of contact between systems of action and the symbolic and cultural universe. A system of actions which accumulates and distributes energy in the form of motivation" (Rocher, 1975, p. 42).

These functions can be generalized to all levels of analysis (individual, group, organization, society) as well as all types of systems such as biological and social. The prerequisite relationships allowed Parsons to describe the purpose of each action subsystem as it relates to the total system of action. These subsystems of action do not function independently. They interact and Parsons describes this relationship as a process of mutual exchange among the subsystems (Schwandt, 1997). He defines the elements of exchange as inputs and outputs or as media of interchange.

A Sociological Model of Organizational Learning

Grounded in Parsonian theory, the organizational learning model developed in this paper focuses on the learning of an organization as a social system. It provides a way of viewing organizational behavior that can explain how people collectively engage in the dynamic social actions associated with learning. It is focused on the system's ability to adapt to its environment not just through a performance orientation but rather through actions (learning) that influence the collective cultural values. In this paper, organizational learning is defined as "a system of actions, actors, symbols and processes that enables an organization to transform information into valued knowledge which in turn increases its long-run adaptive capacity" (Schwandt, 1997, p. 343).

Parallel to the general system of action, the organizational learning system carries out four functional prerequisites so that learning capacity is maintained for the collective. It is postulated that these prerequisite functions are carried out by four learning subsystems. These subsystems and their prerequisite functions are: environmental interface (adaptation) which serves as the information portal for the organizational learning system; the action-reflection subsystem (goal attainment) which consists of the activities the collective uses to accomplish goals of the organizational learning system; structuring subsystem (integration) which is characterized by its ability to match information and knowledge transfer actions with the requirements of other subsystems including integrative acts such as networking, and creating policies; and finally the meaning-memory subsystem (pattern maintenance) that provides the collective meaning and memories. Dysfunction in one learning subsystem will jeopardize the effectiveness of the whole system since each learning subsystem is dependent upon inputs from other subsystems. These interdependent relations are maintained through interchange mechanisms called "interchange media."

Although the use of Parsons' work may invite controversy, no other American sociologist is so widely used in the development of organizational theory (Schein, 1991; Quinn, 1990; Dennison, 1990; Schwandt, 1997). Parsons' theory of action does not constrain us to static predictable interpretations of social systems. Instead the prerequisite functional patterns of actions provide a better understanding of the dynamic social nature of collective learning. Parsons' general theory of action provides "a cross disciplinary (sociology, psychology, biology, and anthropology) synthesis as opposed to a sterile and fragmented model" (Schwandt, 1997, p. 344) from traditional disciplines (Burrell, Reed, Calas, Smircich, & Alvesson, 1994). Empirical research (Casey, 1997; Gray, 1995; Gundlach, 1994) as well as field studies on this model are currently underway.

This paper proposes this sociological model of organizational learning as a guide to developing learning interventions in organizations. Using Talcott Parsons' work, individuals and organizations can be viewed as learning systems with similar required functions and learning needs that arise to facilitate these functions. In the following section, these learning needs and strategies to fulfill them are discussed in the context of this model and its functions and subsystems.

Meeting the Learning Needs of Individuals and Organizations through Multiple Forms of Learning

This section will discuss how organizational and individual learning needs that arise to meet the functional requirements of the learning system may be met. To facilitate discussion and exploration of this model, an example of an integrated strategic planning process following the merger of two companies will be discussed. Strategic planning is common to all organizations as they adapt to changes in the environment and is frequently undertaken following the merger of two companies. In many organizations, strategic plans are developed exclusively by a executive team in a retreat setting. Yet including staff in the planning process can address the required functions of the learning systems and related learning needs through formal, informal, and incidental learning.

Adaptation (Environmental Interface Subsystem)

Organizations and individuals respond continuously to multiple external environments as they adapt and survive. The strategic planning process is an organizational response to changes or potential changes in a market. It can also be a process for gathering information about the external and internal environments to meet the adaptation needs of the organizational learning system particularly if staff are involved in the planning process. Staff involvement in the process can bring their knowledge and an awareness of their needs to the process. In addition, staff through formal and informal learning in sessions develop a greater understanding of the organization's potential and restrictions. Incidental learning may result in tacit knowledge that includes understanding the value the organization places on the input of staff and their concerns.

Through involvement in strategic planning, individual learning needs of staff are met by helping them adapt to the new organization. Individual learning needs may include a desire for more information about the future of the new organization, the consumers it will serve and the product changes to be expected. Involvement in the strategic planning process meets some of these learning needs though the formal, informal, and incidental learning that occurs during the planning. Explicit knowledge may be transmitted formally about the new administration, and consumers interests and demands. Informal settings such as "breaks" or hallway discussions may provide information about new staff in the organization and their roles through incidental learning. Incidental learning about strategic planning processes or group dynamics may happen through involvement in small work groups during the process.

Goal Attainment (Action Reflection Subsystem)

Many learning needs may arise as organizations create and act upon goals and objectives. At the organizational level, following a merger, the organizational mission may change and the goals and related objectives need to be created through strategic planning. The strategic planning process offers time for collective action and reflection regarding directions and goals.

A corresponding individual learning need might be to better understand the changes in the mission and goals of the organization and how these changes will affect roles in a department. This knowledge may be obtained through formal learning in sessions. Action and reflection of individuals in small groups in the planning process may facilitate an individual's understanding of the relationship of these goals to his/her work.

Integration (Structuring Subsystem)

Many strategies are designed to integrate organizations. Dissemination, the more formal procedure for achieving this integration, is frequently accomplished through formal communication procedures in a firm. An organizational learning need that occurs in a newly created organization is how to establish the most effective mechanisms for this formal communication. A corresponding individual learning need of staff in this organization may be to understand new communication channels in the firm.

Diffusion, the informal means for integration, relies upon informal networks that exist among staff. An organizational learning need may arise in a newly created organization related to the establishment of teams within or across units to facilitate these informal networks. Individual learning needs may include a manager's desire to understand how to encourage team work as these units are formed or how to identify and access a "grapevine."

The strategic planning process, while meeting the needs of the performance system of an organization, can also meet organizational learning needs such as the need to integrate staff formerly from two organizations into one newly created firm. The planning process can facilitate meeting this need by involving all staff in the planning process in cross-functional small work groups. Formal learning transmitting explicit knowledge about new roles and expectations may occur during the planning process. Informal learning in hallways may occur as individuals discuss their new roles in the organization. Incidental learning may involve tacit knowledge of group facilitation or an understanding of the philosophy of the new management.

Pattern Maintenance (Meaning/Memory Subsystem)

Meaning and memory in organizations provide the foundation for guidance and control. This subsystem plays an essential role in the culture or pattern maintenance of an organization. At the organizational level, a continuous learning need exists to create and transmit the mission, values and beliefs of the organization. For the individual, a learning need is to know and understand these beliefs and values i.e. "how things are done around here." In the strategic planning process, tacit knowledge of the organizational culture may be gained through incidental learning that occurs in small and large groups during the planning process. Explicit knowledge may be created as the results of the process are formally disseminated to staff and consumers. By designing a process that involves staff in the development of the mission and goals, meaning and memory are engaged as people share the meaning of the goals and objectives through discussion of past goals, the histories of the organizations, etc.

Linking Individual and Organizational Learning Needs

Integrating individual and organizational learning is difficult to accomplish. This has stemmed in part from relying on individual level learning theories or upon organizational theories alone. This paper proposes an integration of

these theories through a sociological framework of organizational learning. Enhancing multiple forms of learning through this framework can meet individual as well as organizational learning needs in addition to facilitating the required functions of a learning system. To achieve this integration, the responsibility for learning in organizations will need to be broadened from the HRD function to all staff in the organization.

At the individual level, staff would be encouraged to be responsible for their own learning. In addition, as is currently the case in many organizations, managers would be charged with fostering the development of staff. Using the organizational model proposed in this paper as a guide, learning plans can be developed keeping in mind all forms of learning and the required functions of a learning system. As learning plans are developed, basic questions related to the required functions of systems could be asked. Examples of questions are given in Table 1 below.

Table 1

Diagnosing Leaning Needs
Organizational Action: Strategic Planning in Response to a Merger

	Basic Questions to be Asked	Individual (Example of Identified Learning Need)	Organization (Examples of Identified Learning Need)
Adaptation (Environmental Interface)	How can the individual/ organization obtain environmental information?	Understand needs for products and services	Obtain staff input on needed products and services.
Goal Attainment (Action/Reflection)	How can the individual/ organization establish and meet goals?	Translate organzational goals into personal goals.	Act and reflect to determine goals.
Integration (Structuring)	How can the individual/ organization be integrated both internally and with other systems?	Understand his/her role in relationship to other roles and structure of the organization.	Communicate information about the strategic planning process and the goals and objectives of the organization.
Pattern Maintenance (Meaning/Memory)	How can the individual/ organization create meaning in the work of the organization?	Understand the values and beliefs of the organization.	Transmit the values and beliefs of the organization through the strategic planning process.

At the group or team level, managers could conduct a learning assessment that reflects the group as a system. For instance, a department could assess if the culture of the group fosters informal learning among members? Are group members free to question procedures and assumptions? Are they aware of how the group or team fits with the rest of the organization? Do they as a group take time to plan and set goals based on the overall mission of the organization? How as a group do they interpret the mission of the organization?

At the organizational level, a key role of managers including HRD professionals will be to develop and maintain a culture which supports individual and organizational learning. Marsick and Watkins (1900) note actions that support continuous learning in organizations including "reflecting on practice, full and free dialogue, public experimentation and inquiry, continuous informal learning of the job fostered by networks." Dixon (1997) uses hallway conversations as a metaphor to stress the importance of informal learning in organizations and the need for an organizational culture that supports questioning of assumptions and learning in all environments.

Additionally, managers will need to focus on organizational actions and the potential consequences of these actions on learning systems at all levels. The model presented in this paper can serve as a framework for a series of questions that can guide managers as they create or respond to organizational actions by analyzing whether actions proposed facilitate the prerequisite functions of not only the performance system but the organizational learning system as well. To facilitate this learning managers need to develop a wide spectrum of skills from the more traditional knowledge of adult learning and program design to organizational diagnosis skills.

Based on this model, evaluation of learning in organizations would need to be expanded as well. Traditionally a training program based on skills development might assess if the skills were learned or possibly attempt to link the program to organizational performance. Translated to the model presented in this paper, most of the evaluation of training is focused on goal attainment function of systems. Evaluation of learning will need to be reframed to measure variables connected with other subsystems as well. For example, did an organizational event such as a strategic planning process contribute to the overall integration of the agency? Did the process develop meaningful goals for the agency and staff? Were these goals disseminated to each agency staff person? What was the incidental learning resulting from the process? Were the goals and the way they were developed and disseminated congruent with the culture of the organization? Are they meaningful to staff?

Summary

The process and interaction of individual and organizational learning are complex. Although considerable research has been conducted on adult learning, research is just beginning on organizational learning and knowledge creation and in the exploration of various methods of learning in the workplace. The connections between these literatures need to be strengthened to build upon the wealth of knowledge being created. The model presented in this paper explores some of the possible links between individual and organizational learning and provides a framework to question the impact of organizational actions on learning systems in organizations.

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Predictors of Learning Organizations: A Human Resource Development Practitioners Perspective

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This study sought to find predictors of learning organizations as determined by Marquardt's (1996) Learning Organization Profile. For this study, 48 professionals comprised of male, female, civilian, and military were asked to rate their perceptions about their organizations. Moreover, they were asked to rate their organizational perceptions on rewards and recognition, training and education, information flow, vision and strategy, and individual team development. The study found two predictors or learning organizations.

Keywords: Learning Organization, Rewards and Recognition, Training and Education

The learning organization is an appealing concept that reflects the aspirations of leaders today—an organization that constantly improves results based on increased performance made possible because it is growing more adroit. The purpose of our discussion is to report on an empirical study which looked at predictive practices that would enable organizations to achieve learning organization success. The outcomes of the empirical study will be put in the context of the current literature on learning organizations, and summarize practice-based variables that are applicable to developing learning organization characteristics. Finally, we will consider the research results and implications for human resource development practitioners and scholars.

Research Questions for Study

The purpose of this research was to determine predictors of learning organizations. Research questions this study addressed were:

1. Were training and education a predictor of learning organizations.
2. Were rewards and recognition a predictor of learning organizations.
3. Were vision and strategy a predictor of learning organizations.
4. Was information flow a predictor of learning organizations.
5. Was individual and team development a predictor of learning organizations.
6. Was gender a predictor of learning organizations?
7. Were military or civilian populations predictors of learning organizations?

Theoretical Framework

Learning Organizations

Since Senge's (1990) work on the "Fifth Discipline", discussions on the concept of learning organizations has grown exponentially. Crossan and Guatto's (1996) study found remarkable publication growth in the literature on learning organizations. From the 1980s to the 1990s, they discovered a 636 percent growth in general publications. It is obvious the literature and interest continues to grow. Roth and Kleiner (1995) have stated that over 150 books and articles were published about learning in organizations, or about the concept of a "learning organization" since they published their work.

It is essential to understand the practices and principles that make up a learning organization. Marsick and Watkins (1994) contend that "the learning organization is not a prescription, but rather a template for the examination of current practices. . ." (p. 354). Senge (1990), as well as other authors, have studied the characteristics obligatory for organizations to achieve learning organization levels of success (Kline & Sanders, 1993; Marquardt, 1996; Watkins & Marsick, 1993). Though important, it is also essential to provide relevant predictor data that provides for the applicability of learning organizations. However, there appears to be an empirical research void on the topic of learning organizations. The vast majority of the literature on learning organizations is

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theoretical in nature. Consequently, this study focused on current practices which predictably lead to learning organizations. Specifically, this research was intended to determine practices, or rather the "what" that leads to learning organization success.

Organizations by their very nature learn. However, some researchers like Daniels (1994) have contended that there is no shared meaning of what constitutes a learning organization. Others such as Calvert, Mobley, and Marshal (1994) contend there are no "true" learning organizations, but only organizations which exhibit certain attributes we might expect a learning organization to demonstrate. Yet others such as Morris (1993) as well as Pedler, Burgoyne, and Boydell (1990), provide a concrete definition of a learning organization as one that facilitates the learning of all its members and continuously transforms itself. Marquardt (1996) expands on this by referring to learning organizations as an "organization which learns powerfully and collectively and is continually transforming itself to better collect, manage, and use knowledge for corporate success" (p. 19). Senge (1990) refers to learning organizations as organizations where people continually expand their capacity to create the results they truly desire, where new expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together All these definitions suggest an important relationship between practices in the workplace and learning organizations.

It is important to note there is a difference between learning organizations and organizational learning. As Marquardt (1996) notes, learning organizations focus on the "what"—the characteristics, principles, and systems of an organization that produces and learns collectively. Learning organization, on the other hand, refer to the "how"—the proficiencies and processes of knowledge development. Scholars have argued that learning organizations lead to turn-around success stories in major corporations (see Garvin, 1993; Marquardt, 1995). Moreover, researchers contend that such establishments developing learning organization practices result in increased organizational performance (Kline & Saunders, 1993; Kuchinke, 1995; Slater & Narver, 1995). Whatever the argument, researchers agree that learning organizations are consequential to success.

Practitioner's Approach to Learning Organizations

Complaints often arise about the lack of relevance in the research emphasis of contemporary academics (see Fulmer, 1995). Scholars are often seen as ivory tower thinkers who have lost the practical side of research. This study is intended to move between theory in academic institutions and the practitioner-based world of human resource development. Studies have shown organization development practitioners are motivated to the field by a desire to have positive effects on people and the organization, desire to institute change, enhance organization effectiveness, exercise influence and power, and seek growth and learning (Van Eynde, Church, Hurley, & Burke, 1992).

Research regarding practitioners' activity patterns showed seven activity categories emerged: human resources planning and development, management style development, vision facilitation, job and structural design, high-technology integration, managing diversity, and planning and forecasting (Fagenson & Burke, 1990). Connor and Ulrich's (1996) work is emphasizing a new direction for HRD practitioners. They believe strategic HR functions such as developing teamwork, identifying training skills and competencies, envisioning and strategizing a customer service mindset, and global expansion are occupying the attention of human resource practitioners world-wide. Given the research on practitioners, this study categorized five HRD domains based on learning organization research. They include training and education, rewards and recognition, information flow, vision and strategy, and individual team development.

Training and Education

Training and education are key aspects of the learning organization. As Gephart, Marsick, Van Buren, and Spiro (1996) note, training is a tool for learning; learning as a desired outcome influences performance improvement. Some scholars believe the goal of training and education in learning organizations is to reach the level of learning facilitation (Cusimano, 1996). Nadler and Nadler (1994) have noted that training leads to learning and learning leads to improved job performance. Moreover, they go on to state there are three domains of learning—skills, knowledge, and attitude. These three domains, Nadler and Nadler believe, are the result of training and education which ultimately lead to enhanced performance. McManus (1995) echoes this approach as well. He states knowledge, skills, and aptitudes are essential for organizational success and learning, and avoiding extinction, in the twenty-first century. Iles (1994) and Robinson, Clemson, and Keating (1997) join the argument by emphasizing that knowledge and skills must be developed in order for organizations to learn.

Rewards and Recognition

There is a plethora of research on this topic. In studies dating as far back to the 1940s, employees have indicated appreciation for work done and a feeling of being in on things are important to their performance (see Nelson, 1996). Nelson's treatise is that recognition boosts employees' esteem and performance and that compensation is a right, whereas recognition is a gift. Bennett and O'Brien (1994) insist rewards and recognition are essential aspects of building a learning organization. As Bennett and O'Brien say, "Reward-and-recognition systems must support and encourage individual and organizational learning. This can take many forms, from honoring individual employees who take risks to offering a profit-sharing plan that benefits everyone when the organization learns and grows" (p. 47). Lippitt (1997) contends that learning within organizations is the result of four building blocks—education, training, mastery, and recognition. Beyond the previous discussion of these first two, Lippitt believes human resource professions must create reward systems to encourage exploration, innovation, and the development of learning. Wilkinson and Kleiner (1993) concur by suggesting there are extensive benefits for both the individual and organization by recognition of learning skills including a greater sense of ownership in the organization. Wilkinson and Kleiner contend that benefits to be derived include reduced turnover and absenteeism, greater employee interest and involvement, and increased focus on organizational values and goal.

Information Flow

Camerer and Johnson (1991) refer to information as descriptive and knowledge as predictive. That is, information relates to the past and the present while knowledge provides a basis for prediction of the future based on information about the past and present. As such, learning is advanced when information flows within the organization. This flow of information is critical to organizational learning and success. Kock, McQueen, and James' (1997) study suggested optimized information flow has impacts on productivity, quality, and learning within organizations which, in turn, leads to organizational competitiveness.

Iles (1994) strongly asserts that information and knowledge must be shared across the organization if working practices are to be improved and risk-taking is to be encouraged. To do this, Iles believes the culture of the organization as a whole needs to be more openly supportive of learning. Tobin (1998) goes as far as to warn that organizations that inhibit information sharing develop into negative learning environments characterized by rigid organizational structures, policies, and procedures that force people to work in the same manner. As example, Davis' (1997) qualitative study on learning organizations found that employees were critical of managers that played games with information and were unwilling to share information. In this environment, the result is potential organizational failure.

Vision and Strategy

Both Senge (1990) and Pedler et al. (1991) make the case for development of a vision in learning organizations. A vision provides members of an organization a direction by which they can navigate. There are few if any examples of great companies who have achieved success without incorporating a vision. As Marquardt (1996) states "when there is a truly shared, genuine vision, people tend to excel and learn" (p. 46).

Robinson, Clemson, and Keating (1997) suggest that the role of learning in the organization follow two premises—there must be a shared vision and the existence of the learning system required to achieve the vision. The shared vision indicates the shared goal the future, set the direction for the organization and implies the particular type of learning system needed. The learning system provides the means. Bennett and O'Brien (1994) assert organizations and their constituents should envision their future so that they can determine the learning required to get there. Vision, Garavan (1997) indicates, is the catalyst that enables a learning organization culture to be created. Such a culture of learning takes an organization from invention to innovation. Campbell and Cairns (1997) work on developing and measuring learning organizations indicates some of the predictors listed in this study including vision and strategy, rewards and recognition, and information. As regards vision and strategy, they contend both are necessary towards measuring the success of learning organizations and developing a long term commitment.

Individual and Team Development

According to Bennett and O'Brien (1994), learning organizations should seek ways to motivate their employees to develop individually and promote the growth of teamwork. Teams, and individuals within teams, provide the means for organizations to learn effectively by continuously reinvent their work. Both teamwork and individual empowerment are required of organizations that pursue a learning organization strategy.

Senge (1990) argues team building is a vital component of building a learning organization. Much as individual empowerment is essential to success, similarly, teamwork and team empowerment is fundamental towards developing the learning capacity of an organization. Team learning starts with dialogue which is free flowing, allows members to develop new and creative ideas, and ultimately to see beyond themselves and focus on the organizational perspective (Appelbaum & Goransson, 1997). Gardiner and Whiting's (1997) empirical study on success factors in learning organizations support this notion with their results that indicated organizations were more like learning companies when they were empowered as teams and individuals.

Methodology

The independent variables, training and education, rewards and recognition, information flow, vision and strategy, and individual team development were assessed using the Learning Organization Practices Profile (O'Brien, 1994). The instrument has 12 subsystems of which 5 were used for this study. Each subsystem consists of five questions that range from 5 = strongly agree to 1 = strongly disagree. The five areas and a sample of their questions were as follows:

Vision and Strategy:

1. We have a vision of ourselves as an organization in which learning and purposeful change are expected.
2. The vision and strategy are continually updated, based on changes in the business environment and customers' needs.

Information Flow:

1. We communicate key business information to all employees through channels such as organization newsletters, department meetings, and/or all-personnel meetings.
2. We utilize advanced technology to improve the flow of information and to enhance our communications with one another (for example satellite TV, computer networks, electronic mail, cellular phones,, or pagers).

Individual and Team Development:

1. Work teams and long-term project teams have specific learning agendas.
2. Taking responsibility for our own learning and devleopment is considered part of our jobs.

Training and Education:

1. Educational programs include skill training on becoming more creative problem solvers.
2. Formal training programs provide us with tools, job aids, or processes that enhance on-the-job performance.

Rewards and Recognition:

1. We are recognized for solving business problems or successfully meeting challneges.
2. We share directly in the profits of the business through a profit-based reward system.

The dependent variable was assessed using Marquardt's (1996) Learning Organization Profile listed in his text "Building the Learning Organization." The profile has five subsystems. They include Learning Dynamics: Individual, Group/Team, and Organizational; Organization Transformation: Vision, Culture, Strategy, and Structure; People Empowerment: Employee, Manager, Customer, Alliances, Partners, and Community; Knowledge Management: Acquisition, Creation, Storage/Retrieval, and Transfer/Utilization; and Technology Application: Information Systems, Technology-Based Learning, and Electronic Performance Support Systems. There are a total of 50 questions in the profile where participants respond from 4 = applies totally to 1 = applies to little or no extent.

For this study, 48 working professionals in a Human Resource Development Master's Degree program volunteered to take both instruments. Of the 48, 27 were female, 21 were male, 16 were military, and 32 were civilian. Fifty questionnaires were handed out and 48 were returned for a 96 percent return rate.

Results and Conclusions

The Learning Organization Profile (Marquardt, 1996) and subsystems of the Learning Organization Practices Profile (O'Brien, 1994) were administered to 48 working professions with diverse occupations. Military personnel were either active duty military or Army National Guard Reserve members. Approximately half were officer and active duty while the rest held positions in a wide variety of occupations—teacher, administrator, manager, and so forth. Civilian personnel also held a wide variety of positions including human resource specialist, training manager, hospital administrator, educator, civil service manager, flight controller, and so forth.

Statistical analysis was completed using Statistical Package for the Social Sciences (SPSS). Descriptive statistics, Chronbach's alpha, one-way ANOVA, and multiple linear regression were utilized. The majority of participants were female (56 percent) and civilian (67 percent). Internal consistency reliability for this study was determined using Chronbach's alpha. This technique is versatile because it can be used with instruments made up of items that can be scored with three or more possible values. Overall, the five predictor variables reliability measured in the high .80s and low .90s with only one moderate alpha below .80 (range = .78 to .92) while the Learning Organization Profile (dependent variable) had a very high reliability measure of .97.

As noted in Table 1 and Table 2, this study determined there were two significant predictors of learning organizations when all five predictor variables were entered simultaneously using multiple linear regression. Rewards and recognition ($p = .003$) as well as training and education ($p = .045$) were predicted significantly and positively from the Learning Organization Profile. In other words, those participants who answered positively that they received rewards and recognition on the job and belong to an organization that emphasized training and education were most like to assess their work environment as a learning organization. These two areas accounted for 63 percent of the variance (see Table 3).

Gender as well as military versus civilian status was also explored as predictors of learning organizations. However, the data suggested there were no significant differences or predictors between men and women or military and civilian employees.

Table 1

ANOVA Table of Multiple Linear Regression

	SS	df	MS	F	Sig.
Regression	8.66	5	1.73	16.86	.000
Residual	4.32	42	.103		
Total	12.98	47			

$p < .05$

Table 2

Summary Table Showing Significant Standardized Betas for Independent Variables with the Learning Organization Dependent Variable

	Standardized Beta Coefficents	t	Sig.
Rewards & recognition	.52	3.13	.003
Training & education	.29	2.06	.045
Vision & strategy	.21	1.42	.164
Individual & team development	-.21	-1.21	.232
Information flow	.10	.76	.454

$p < .05$

Table 3

Table Showing R, R^2, and Adjusted R^2

	R	R^2	Adjusted R^2
Predictors	.82	.67	.63

How This Research Contributes to New Knowledge in HRD

Few empirical studies have been published on the subject of the learning organization. The majority of the research is theoretical in nature. This study focused on empirical research to attempt to determine practical approaches to developing learning organizations. The study determined two predictors out of five subsystems—rewards and recognition and training and education. Individuals within organizations who felt their work was appreciated, rewarded for taking chances, not punished for mistakes, and had a rewarding management system were overwhelming likely to define their workplace as a learning organization. To a lesser but still significant extent, training and education were predictive of learning organizations. That is, those individuals who felt their work environment was supportive of practices that included skill training, problem solving education, diagnostic tool support, encouragment to learn new skill and knowledge, and formal training programs tended to see their organization in the context of learning organizations. This is important to both scholars and practitioners for several reasons.

Human resource development professionals know learning organizations increased productivity and performance. Researchers have extolled the benefits of learning organizations--they lead to turn-around organizational achievement (see Garvin, 1993; Marquardt, 1995). Furthermore, researchers contend that such establishments developing learning organization practices result in increased organizational performance (Kline & Saunders, 1993; Kuchinke, 1995; Slater & Narver, 1995). There is little dissention that learning organizations are believed to be important to bottom line success.

The results of this study lend empirical evidence to theoretical logic. First, that appropriate rewards and recognition are an undergirding structure to the learning organization. When present, the findings suggested organization members viewed their enterprise as a learning organization. Second, that an environment of knowledge sharing and learning systems was an indication of learning organization.

Cahill (1997) has lauded the environment where mistakes are rewarded, accepted, and encouraged. This experience is what he refers to as a learning organization environment where rewards and recognition flow freely. The majority of questions in the Learning Organization Practices Profile (O'Brien, 1994) regarding rewards and recognition were intrinsic rewards. This is significant for two reasons. First, the cost of intrinsic rewards (appreciation, thank-you, pat on the back) is minimal yet we find the return on investment is statistically significant (accounting for 63 percent of the variance with training and education). Second, scholars such as Tobin (1998) and Bennett and O'Brien (1994) insist rewards and recognition are essential aspects of building a learning organization. Such a learning organization lead to employees who create a positive learning environment that encourages organization-wide learning and productivity—a recipe for success.

Training and education have important ramifications for HRD professionals seeking to develop learning organizations. It can be a valuable tool in workforce education. Wick and Leon (1993) note the advantages of training include subject matter in a timely fashion, baseline knowledge, introduction to new paradigms, and development of interpersonal skills. Applelbaum and Goransson (1997) see training as an inadequate but first step on the road to learning organization development.

The findings from this study support the notion that interventions intended to aid in the metamorphous from a current organization state to that of a learning organization, may wish to focus initially on two aspects. These aspects are the systems and indicators related to rewards and recognition, and training and education. The data recognizes reward and recognition as very significant. Especially of interest is the value of intrinsic reward. Posed within a cost benefit context, this reward emphasis and shift is inexpensive to achieve, quick to implement through moderately intense O.D. interventions, and is efficient in terms of time. As such, the return on investment (ROI) is great relative to tangible cost.

The other predictor of the learning organization resulting from the study was found to be training and education. Although this dimension of learning organization development and maintenance has more tangible costs, the outcomes in terms of positive benefit are easily observed. Work by Geroy and Swanson (1987, 1986, 1984) has

shown not only predictive positive ROI potential, but summative bottom line improvement can be realized through strategic training investment. Beyond the ROI imperative, the investment in training and education supports the new paradigms of succession planning which emphasize pool candidacy preparation rather than replacement planning. In this model, individuals use the training and education opportunities to prepare for pools of qualified individuals who will be needed to situationally support and be valued in vertical, lateral, and downward mobility strategies to meet enterprise needs.

Based on the data from this study, it is our contention that HRD and HRM professionals should emphasize behaviors and strategic change, which focus on these two significant predictors of learning organizations. We suggest that the result will be maximization of the momentum toward the designed organization changes and performance which have been attributed though theoretical studies to the learning organization dynamic.

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Action Learning and Systems-level Continuous Learning

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Systems-level continuous, or organizational, learning, is an important element in building learning organizations. The results of an evaluation of an ongoing 2 year action learningprogram in a major Northeast utility company demonstrate that action learning can help to create the capacity for systems-level continuous learning.

Keywords: Action Learning, Systems-Level Continuous Learning, Organizational Learning

Much has been written in this decade about the need for organizations to develop the capacity for learning, in order to create and manage knowledge that can be used for organizational success—in other words become a learning organization (Marquardt, 1996; Marsick & Watkins, forthcoming; Redding & Catalanello, 1994; Senge, 1990; Watkins & Marsick, 1993;). One of the key components, and one of the more difficult endeavors in becoming a learning organization, is the development of systems-level continuous, or organizational, learning (Argyris & Schon, 1978; Marquardt, 1996; Marsick & Watkins, forthcoming; Redding & Catalanello, 1994).

A number of authors hold that action technologies (Brooks & Watkins, 1994)—particularly action learning—can be used to develop systems-level continuous learning (Dilworth, 1998; Marquardt, 1996; Marsick & Watkins, forthcoming; Watkins & Marsick, 1993). While there are stories of how action learning, and other methodologies, have been used to help build learning organizations, many tell the story of a short term intervention, interventions involving few people, or from the perspective of anecdotal data (Chawla & Renesch, 1995; Watkins & Marsick, 1996).

This paper looks at the question—Can action learning help to develop systems-level continuous learning within an organization? To help answer this question, the paper reports on the results of an organizational evaluation of an action learning program, involving over 250 people, ongoing in the Distribution department of Public Service Electric & Gas (PSE&G) in New Jersey for over 2 years. This evaluation demonstrates an impact on systems-level continuous learning in the organization.

Systems-level Continuous Learning/Organizational Learning

Many authors look at systems-level continuous, or organizational, learning as having two components (Argyris & Schon, 1978; Marquardt, 1996; Marsick & Watkins, forthcoming). The first component is described by Argyris and Schon as occurring when "members of the organization act as learning agents for the organization" (1978, p. 29) and by Marquardt as "through the shared insights, knowledge, and mental models of members" (1996, p. 37). Marsick and Watkins who adopt the approach of Argyris and Schon say that "people are appointed or otherwise anointed by followers, to act on behalf of a system. When these individuals learn, they can take their learning back to the system" (forthcoming).

The second component deals with ways in which this individual learning becomes a part of the organization. The process can be thought of in terms of "restructuring organizational theories of action" (Argyris & Schon, 1978, p. 29); building on past organizational memory and the sharing of knowledge, beliefs and assumptions (Marquardt, 1996); or having "structures, systems, and a culture in place to embed and support organizational learning in order to make it permanent and routine so that learning endures even if the people do not" (Marsick & Watkins, forthcoming).

The action learning program at PSE&G was designed with an evaluation process to look at both of these components. Ongoing evaluation looked at individual and team learning and how that learning was carried into the workplace. The topic of this paper, the organizational evaluation, looked at whether or not that learning had spread elsewhere in the organization.

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Action Learning

The concept of action learning originated with the work of Reg Revans in England in the 1940s (1989). It can be generally defined as follows:

> Action learning is an approach to working with, and developing people, which uses work on a real project or problem as the way to learn. Participants work in small groups to take action to solve their project or problem, and learn how to learn from that action. A learning advisor (or coach) works with the group in order to help them learn how to balance their work, with the learning from that work (O'Neil, forthcoming).

"One of the problems of describing action learning is that it means different things to different people" (Weinstein, 1995, p. 32). As a result, discussions and explanations of action learning programs can appear to be describing different, and sometimes contradictory, events. One way of thinking about differences in action learning is through the underlying basis by which practitioners view that learning takes place during action learning. O'Neil (forthcoming) has identified 4 "theoretical schools" of action learning that help to clarify some of these differences.

School	Scientific	Experiential	Critical Reflection	Tacit
Theory	Learning from problem solving - Alpha, Beta, Gama	Learning from experience	Learning through critical reflection	Incidental learning
Practitioner	Revans (1989)	McGill & Beaty(1995) Mumford (1996)	Marsick (1990) Pedler (1996)	Noel & Charan (1992)

Practitioners who espouse the Scientific school believe that action learning participants learn through solving their problem using methods based in the scientific method. Revans categorizes his theory of Systems Alpha, Beta and Gamma as a scientific based method for achieving managerial objectives (1982). Proponents of the Experiential school see Kolb's learning cycle (1984) as the basis by which individuals learn. In the Critical Reflection school, practitioners believe participants need to go beyond problem solving to problem posing, and reflection on the basic premises that underlie their thinking. Mezirow (1991) refers to this kind of reflection as "critical reflection". Marsick and Watkins refer to incidental learning as "never planned or intentional ... always tacit" (1992, pp. 7&8). The main differences between the Tacit school, and the other three, are its strong focus on the project and its lack of intentionality and planning for learning.

These "schools" do not officially exist, and are not intended to label practitioners in any way, but are intended to clarify differences in the literature and practice. Based on his/her view of how learning takes place in action learning, the practitioner will be influenced in how he/she designs the action learning program; how the learning advisor/coach may interact with the group; and in what he/she expects as outcomes from the program.

Public Service Electric & Gas Program

The PSE&G program was developed in 1996 to help the Distribution department learn how to be successful in the new competitive environment that was quickly replacing their former regulated, hierarchical world. The objectives established for the program were:

> Enhance the way people communicate and interact with one another.
> Weave quality tools and behaviors into the fabric of the organization.
> Develop and use problem solving and coaching skills.
> Develop an environment of openness and trust and get conflict out on the table.

After two initial pilot sessions, which included the target population (supervisors and managers) in the first pilot, and the senior leaders of the organization in the second, the program has completed 9 sessions with a total of over 250 participants. Each session averages 28 participants formed into 4 teams. The teams address team projects sponsored by senior leaders in the organization. Each team meets for a minimum of 6 ½ days over a 6 week period with a learning coach, and additional days on their own. At the end of the session, each team proposes

recommendations to the entire senior leadership team. Most teams are involved in implementation of their recommendations after the end of the session.

Based on the needs of the organization, and on the beliefs of the action learning practitioner co-designing the program, the design of the initiative would place it in the Experiential school, with some design elements intended to support learning through critical reflection as well. For example, teams used a learning style inventory to help with understanding learning from experience, and an exercise to examine assumptions was used with teams as they began work on their projects. The overall design was aimed at helping develop individual, team and organizational learning. The evaluation process was to determine the success of these efforts.

Methodology

As discussed earlier, there is ongoing evaluation during, and after, each program in order to determine what individuals and teams have learned, and what learning they have carried back to the workplace. In order to try to begin to determine if this individual and team learning was evolving into shared knowledge, if it was becoming more permanent and routine, a 2nd evaluation effort was undertaken. The intent of this 2nd evaluation effort was to try to determine what former participants were seeing elsewhere in the organization that indicated whether or not learning and change were taking place.

The method used for the evaluation was semi-structured interview questions. This method was chosen since the researcher/evaluator was trying to find out past participants' perceptions of their environment and of the action of people around them (Brookfield, 1987), and needed the flexibility to probe for more details and investigate new areas as they arose (Grandstaff and Grandstaff, 1985). There were 4 questions developed that aligned with the 4 objectives of the initiative. The questions used were:

1. Have you found other people in Distribution who are able to say things more openly with you and with others since the start of the program? Why do you think that is?
2. Do you see more teamwork (cooperation) with others inside and outside your department since the start of the program? Why is that?
3. Do you feel people are acting any differently when there is a disagreement now than before the program? What do you think the reason is for that?
4. Do you see the quality tools, or the ideas behind them, being used more now than before the program? What is causing that?

A researcher not connected with the program made the calls. He made the calls on 5/11, 6/15, 7/26, and 7/29-7/31/98. He made attempts to reach all participants who had attended sessions from the pilot through the 6th session—a total of about 200 participants—and was successful in reaching 77 participants who had the time to participate in the interview. The interviewer transcribed responses directly into a computer.

Since the evaluation was trying to determine if there was any evidence of systems-level continuous learning, the following criteria was developed to code the interviews:

Yes, without qualification—interviewee strongly stated/indicated that he/she had seen evidence of learning and change.
Yes, with qualification—interviewee stated/indicated, with some reservation/qualification, that he/she had seen evidence of learning and change.
No, with qualification—interviewee stated/indicated, with some reservation/qualification, that he/she had not seen evidence of learning and change.
No, without qualification—interviewee strongly stated/indicated that he/she had not seen evidence of learning and change.

Two researchers coded the first 5 interviews in order to establish inter-rater reliability. These interviews were coded independently by both researchers, results compared and discussed, and discrepancies resolved. After this check, the first researcher coded the remaining interviews.

Findings

Shown below are the findings from the interviews that are broken down by individual questions. Examples of interviewees' responses from each category are also provided.

1. Have you found other people in Distribution who are able to say things more openly with you and with others since the start of the program? Why do you think that is?

	Number of participants	Percentage of total responses
Yes, without qualification	31	40.3
Yes, with qualification	19	24.7
No, with qualification	15	19.5
No, without qualification	12	15.5
Total	77	100.0

Yes, without qualification—"Yes, I think the program has allowed them to focus their attention in a manner that they are not afraid to speak up whether they say it the right way or not."
Yes, with qualification—"Yes, the supervisors here that have gone through the program are a little bit more open to say things than the ones that have not gone through it"
No, with qualification—"No, I think we have always had an open dialogue. ... One difference I was put in a situation ... the moderator asked me a question about the new organization and I gave it. In the past the person leading the meeting would not have even asked that question and I would not have had the opportunity to volunteer."
No, without qualification—"No, I have not seen any change. The people who were good communicators before are still good communications, and those that were not before the program are still not."

2. Do you see more teamwork (cooperation) with others inside and outside your department since the start of the program? Why is that?

	Number of participants	Percentage of total responses
Yes, without qualification	37	48.0
Yes, with qualification	17	22.1
No, with qualification	16	20.8
No, without qualification	7	9.1
Total	77	100.0

Yes, without qualification—"Our teamwork is excellent. I know that as we move towards a more competitive environment, we need to work even closer together. I think that people are much better at listening."
Yes, with qualification—"Yes I do see more cooperation between the lower echelon trying to have partnerships. Management up on top seems to still want the control, and you can cut them right in half in that regard."
No, with qualification—"No. I do see more, but I am not sure what is causing it. We have been going through downsizing, which I believe is causing us to keep more people in the loop. It is possibly a combination of the two."
No, without qualification—"No, I think a lot of it has to do with ego, and our goals do not compliment each other's goals".

3. Do you feel people are acting any differently when there is a disagreement now than before the program? What do you think the reason is for that is?

	Number of participants	Percentage of total responses
Yes, without qualification	32	41.6
Yes, with qualification	20	26.0
No, with qualification	19	24.6
No, without qualification	6	7.8
Total	77	100.0

Yes, without qualification—"Yes, they are more willing to listen, to take two steps back and listen. Before people would be argumentative."

Yes, with qualification—"Yes, I might have a disagreement with someone at my level. In the past there would be a stalemate, but now are supervisors are watching, and they will step in to rectify the situation if necessary. So I think resolving disagreements is happening."

No, with qualification—"People are listening and understanding more in disagreements, but to say they are acting differently, I can't say."

No, without qualification—"No, the culture is entrenched, and I do not think that the program is going to change PSE&G's culture."

4. Do you see the quality tools, or the ideas behind them, being used more now than before the program? What is causing that?

	Number of participants	Percentage of total responses
Yes, without qualification	46	59.7
Yes, with qualification	15	19.5
No, with qualification	11	14.3
No, without qualification	5	6.5
Total	77	100.0

Yes, without qualification—"Yes, absolutely because people are aware of the quality tools. ... If I tell a person the answer is no, I now explain why. This has already helped me in my communication skills."

Yes, with qualification—"We have talked a lot about the quality tools before the program. ... However the people that have attended the program have shown an improvement in using the quality tools. They are more aware of how to use these tools."

No, with qualification—"I think it is an inconsistent message from upper management, and they do not lead by example. ... Upper management is demanding we follow the quality behaviors, but they do not always themselves."

No, without qualification—"No, you need time to systematically solve problems and we are always fighting fires. We are not given an opportunity to use them properly. There is a lot more frustration because of that."

Analysis and Conclusions

The findings indicate that the individual and team learning participants gained from the action learning program has begun to become a part of the organization. Going back to the earlier stated descriptions of systems-level continuous/organizational learning, interviewees have begun to see some restructuring of organizational theories of action, "Yes, I think that people are starting to believe that upper and middle management want people to express their feelings and ideas". Some of what is being seen builds on past organizational memory, and is changing the mental models in the organization.

> "Yes, we are not a lot of hot heads anymore. We are acting more grown up, more mature, more professional. We have less stress because of the way we are dealing with disagreements. We are using more of the reflection part of the program. It is more of an "us" concept."

There is evidence that there are systems in place to help learning endure, "We are starting to get a complete buy in on the program, and I am starting to see that happening both inside and outside the department".

One way to think about why this action learning program has helped PSE&G develop systems-level continuous learning is by looking at the intervention through the lenses of some of the learning organization theories in the literature. Some of these theories include Senge's 5 disciplines (1990); Beckhard and Pritchard's profile of a learning organization (1992); Redding and Catalanello's theory of strategic readiness (1994); and Marsick and Watkins' action imperatives (forthcoming; Watkins & Marsick, 1995). Marsick and Watkins' framework seems most appropriate to use for analysis since they most explicitly advocate the use of action technologies such as action learning to help create learning organizations.

In their work, they discuss action imperatives—activities in which they think organizations need to engage in order to become learning organizations—at the individual, team and organizational level. At the organizational level, they have found 4 action imperatives—establish systems to capture and share learning, empower people towards a collective vision, connect the organization to its environment, and provide strategic leadership for learning. PSE&G has engaged in activities in support of the action learning program that fit with these action imperatives.

In order to help establish systems that will serve to capture and share the learning coming from the action learning program, PSE&G has made a number of efforts. Key to sharing learning has been the decision and dedication to have a significant number of members of the organization participate in the program. To date, there have been over 250 graduates, and the commitment to enable a total of 60% of the population to attend the program by the end of 1999. In order to continue to sustain learning in graduates, the organization has had 2 "learning days" during which up to 90 graduates participated in exercises to review and reinforce what they took away from the program. Finally, the organization has begun to integrate the expected learning and change into their evaluation system.

The vision for change and transformation in the organization has been frequently and clearly communicated by the senior vice president and other senior leaders since the beginning of the program. The vision stresses the importance of a combination of new behavior and results in order to achieve success. The senior vice president stresses this vision at every opportunity both within and outside of the program. The new behaviors wanted in the organization are further reinforced through the objectives of the program.

PSE&G has an established history of being connected with the community and environment. This connection has been seen in the program, as well, through the choice of some of the projects for teams. These projects have included improving interaction with municipalities, customer service oriented projects, and projects that have stressed volunteerism in the community.

Finally, providing strategic leadership for learning showed up in several ways. The senior vice president and his senior leaders all attended the program as participants in the 2nd pilot session. As the program rolled-out in the organization, the senior leaders assumed the sponsorship role, with many of them sponsoring more than 1 team. The program ends with a full day of presentations with the teams focusing on their learning and their project recommendations. Unless they happen to be out for the day, the senior vice president and all his senior leaders attend every closing day session.

This action learning program has provided a means through which PSE&G has been able to create and sustain systems-level continuous learning. Part of the reason for this may be the magnitude and duration of the intervention. It also appears that the organization has been working to implement a number of action imperatives that Marsick and Watkins' research have demonstrated are important for systems-level continuous learning.

Based on these results, future research in this area could look at a number of issues. How extensive does an intervention need to be to generate systems-level continuous learning? What other kinds of interventions would be as effective as action learning? What else are organizations doing (or should be doing) to reinforce and sustain systems-level continuous learning?

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Expatriate Managers and HRD: The Missing Link

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Despite considerable research in the area of expatriate assignments, the failure rate continues to be high. This paper reviews the literature on selection, training, retention, and organizational strategy related to expatriate assignments. The authors present a model that ties international human resource development to the strategic goals and mission of the organization.

Keywords: Expatriate Managers, Expatriate Training

Since the late 1970s, the world has experienced extraordinary growth in global business due to the reduction/removal of trade barriers and improved communication. In addition to the growth in total volume of world business, the number of businesses involved in international ventures and the importance of those international ventures to the organizations' well-being have grown markedly. As a result of these developments many of these businesses have increased their numbers of expatriate managers along with this increased focus on global operations. During this same period, there has also been a tremendous growth in the volume of literature addressing issues related to expatriate assignments in management. Despite the considerable increase in literature (much of it research-based), the level of concern about the effectiveness of expatriate managers' performance appears to be undiminished. Shay and Tracey (1997) found that 25 to 40 percent of American expatriates return early if posted to developed countries and that the failure rate increased to 70 percent if the expatriate was posted to a developing country. These rates were similar to those found in other studies reported over more than the last 20 years (Baker and Ivancevich, 1971; Black and Mendenhall, 1990; Deshpande and Viswesvaran, 1992; Tung, 1981). The explicit costs of such early returns vary, but various studies suggested that each such failure costs the organization between $55,000 and $1 million (Copeland and Griggs, 1985; Deshpande and Viswesvaran, 1992; Harris and Moran, 1987; Shay and Tracey, 1997). This represents a significant expense to the organizations involved and does not include the costs associated with the possible loss of human capital investment if the organization loses the expatriate manager as a result of the incident. A variety of studies examine the causes of expatriate failure and suggest ways of improving the success of expatriate assignments (Black and Mendenhall, 1989; Inkson, et al., 1997; Katz and Seifer, 1996; Nicholson, Stepina, and Hochwarter, 1990; Shay and Tracey, 1997). While these and numerous other studies support the potential of training to improving expatriate performance and reducing of the failure rate, additional studies document how little training is actually provided to expatriates. Tung (1981) found that 32 percent of companies provide training for foreign assignments. Mendenhall, Dunbar, and Oddou (1987) believe that number to be as low as 10 percent. They go on to suggest that the reasons that organizations do not use training more often to prepare managers for expatriate assignments are linked to top management's perceptions that such training is unnecessary, ineffective, inconvenient or difficult to find, and too costly.

Research Question

This paper addresses the following research question:

> What do we know from research about the factors related to the successful/unsuccessful performance of expatriate managers?

Additionally, we propose a model for linking HRD decisions to overall organizational strategy when making decisions related to the use and preparation of expatriates.

Factors Related to the Success and Failure of International Assignments

Success in international assignments has not been clearly defined in the literature. In practice, success is most commonly inferred as the absence of failure. Numerous studies address desirable attitudes for expatriate managers and/or identify organizational activities that are associated with improved performance. In theory, there are many ways of judging the failure of international assignments. In most of the research, failure falls into one of these three categories: failure based on early return from the assignment, failure based on inadequate performance of the

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expatriate while on the assignment, and failure based on loss of human capital to the organization related to the international assignment. These are illustrated in the following review of literature

Tung's (1981) early research on expatriate managers identified the three most common reasons that expatriates returned early from an assignment as: (1) the spouse couldn't adapt to the new culture, (2) the manager couldn't adapt to the new culture, and (3) the family experienced serious problems related to the assignment. In Shay and Tracey's (1997) study of expatriate managers in the hotel industry, findings of the reasons for failure in overseas assignments were consistent with Tung's (1981) first two reasons. But the third most important reason for the failure emerging from their study was the personal or emotional immaturity of the manager. Shay and Tracey (1997) suggested that the importance of relational and social skills in the hotel industry may be greater than for other industries. Five of the top six ranked attributes desirable in expatriate managers were associated with interpersonal and social skills rather than technical skills. They research suggested that there may be differences among industries in the factors that affect success and failure of expatriate assignments.

Selection and Training

Both Tung (1982) and Katz and Seifer (1996) identified three options for staffing overseas positions, parent country nationals, host country nationals, and third country nationals. There are a variety of factors identified as affecting the staffing decision, often dependent upon the nature of the position. Traditionally, the primary consideration in selection has been technical expertise. Numerous studies have suggested that interpersonal skills, family situation, relational abilities, environmental factors, and personality could reasonably be included in selection criteria (Guzzo, Noonan and Elron, 1994; Mendenhall and Oddou, 1987; Tung, 1981, 1982). Nicholson, Stepina, and Hochwarter (1990) suggested that companies should consider matching characteristics of potential expatriates with the cultural profile of the host country. While good training can contribute to enhanced cultural awareness and adaptability, it is not the only way of acquiring such knowledge and skills. Overseas experience whether through programs such as the American Field Service (AFS) or as an independent personal experience, contributes to enhanced cultural understanding (Inkson, et al., 1997; Wilson, 1998). The Inkson (1997) study identifies characteristics of those acquiring overseas experience including the view of cultural experience as important as work, individual is self supporting and curiosity driven, that suggest that overseas experience may be a factor that organizations should consider in the selection process for expatriate assignments. Regardless of the staffing methods used, training is necessary to maximize positive outcomes from overseas assignments.

There is an impressive body of literature on selecting and training managers for international assignments. Researchers have developed models based on learning theory and cognitive processes (Black and Mendenhall, 1990; Guzzo, Noonan, and Elron, 1994; Mendenhall and Wiley, 1994; Nicholson, Stepina, and Hochwarter, 1990) getting away from anecdotal information to theory based arguments for training. Yet, many of the problems identified in the 80's such as inadequate selection procedures, premature departure from foreign assignments, ineffectiveness of expatriates, family problems and influences on job performance are still with us today (Inkson et al.,1997; Nicholson, Stepina, and Hochwarter, 1990; Shay and Tracey, 1997).

Training, and particularly cross cultural training, will allow expatriates to adjust to different cultures more rapidly and, as a result, will enhance their performance in the new environment (see Deshpande). Nicholson, Stepina, and Hochwarter (1990) argue that expatriates must be prepared in three areas – technical, cognitive, and emotional, in order to succeed. They believe that training will sensitize the expatriate to the target culture and as a result, the expatriate will be more effectively socialized which is in the interest of both the expatriate and the company. Expatriates must learn a whole new set of complex rules that apply to the host culture, yet the monocultural expatriate does usually not know how to decipher the rules, let alone adjust to them (Mendenhall and Wiley, 1994). In addition, companies seldom match the characteristics of a potential expatriate with the cultural profile of the host country (Nicholson, Stepina, and Hochwarter, 1990).

There seems to be an agreement that this could be established through training. Based on research, training is believed to reduce the failure rate by 14 percent. Therefore, it is assumed and argued that training is beneficial and companies should provide such training. However, many managers still believe that a good manager is a good manager anywhere; what counts is technical ability rather than cultural sensitivity (Black & Mendenhall, 1989; Mendenhall, Dunbar, and Oddou, 1987).

Employee Retention

Like other kinds of training, employer provided training to prepare employees for expatriate assignments represents an investment in human capital. Such training usually consists of two types, general training and company specific training. General training increases the employee's marginal productivity equally to the employer providing the training and to other employers. Company specific training increases the employee's marginal productivity only to the current employer (Becker, 1993). The greatest proportion of the employer paid training associated with expatriate assignments is general in nature. This may account in part for the apparent reluctance on the part of many employers to adequately prepare their expatriates (and, perhaps, their families) to effectively complete their overseas assignments. Mendenhall, Dunbar, and Oddou (1987) list six reasons why companies are reluctant to provide adequate training for international assignments. In summary, they are: perceived ineffectiveness of such programs by both, management and trainees, lack of time from selection to posting for meaningful training, trend to employ host country nationals, too costly for short term assignments, no perceived need by executives. In short, the perception is that such programs are too costly, not effective, and not necessary. If that is what executive actually believe, no model for training, no matter how good, will convince them that they should invest in such training.

Failure to train, lack of support, and ineffective repatriation for employees after the overseas assignments contributes to the loss of employees and the company's significant human capital investment in them. The status of the psychological contact between employees and expatriates mediates the relationship between the employee practice and the retention of expatriates (Guzzo, Noonan, and Elron, 1994). What an employer does to support an employee during an expatriate assignment and during repatriation influences the employee's decision to remain with the employer or leave during or after the assignment.

Organizational Strategy

The trend to polycentric staffing has given many managers the feeling that all they need to do is hire host country nationals, and their intercultural problems will go away or be solved easily (Kobrin, 1988; Tung, 1981). After all, many foreigners have received MBAs from American universities. They speak English; they have lived in the U.S. for several years, and they know their home turf. This appears much more cost effective than training an American to do that same work. The question of course is whether this will solve the current problem and help in global competition. Kobrin (1988) maintains that the changes in staffing have an impact on strategic management in four distinct areas: the development of corporate worldwide objectives, employee identification with the entire organization rather than just a local subsidiary, relationship between subsidiaries and headquarters, internationalization of home country employees. Kobrin is one of the few researchers who explicitly ties the need for training to the overall corporate strategy. In his view, the successful global organization will need people who have a grasp of the global environment and how the corporation fits into this. The need for direct social contact in the host environment is not just nice to have but essential in reaching corporate goals. Training then, if one follows Kobrin's argument, is necessary to meet corporate objectives of the global firm. The training needs to help the expatriate to learn the appropriate culture of the subsidiary country and the subsidiary organization while at the same time understanding the overall corporate goals and mission (Black and Mendenhall, 1989; Katz and Seifer, 1996).

A Proposed Model of Organizational Decision Making

Human resource decisions related to an organization's international operations are very complex. There are many factors that can affect those decisions and not all of them are predictable and controllable by the organization. The model for organizational decision making shown in Figure 1 represents the process that should guide organizations in making decisions about how to staff international positions; how to select, prepare for expatriation and repatriate staff and integrate international experience into career paths within the organization. There are three stages that occur in sequential order. Decisions made in stages 2 and 3 are dependent on decisions made in earlier stages. The model we present here links decisions about career development, training, and organization development to the mission of the organization.

In stage 1, the organization must assure that its international human resource decisions are in alignment with overall organization mission and goals. On the very low end of the continuum of criticality/instrumentality might be the expectation that the organization sees international operations as an occasional source of sales and/or supply opportunities that are very flexible and may be expected to change frequently with market changes both at

home and abroad. A domestic company that sells its occasional oversupply to buyers in other countries would fit here. On the very high end of the continuum, we would expect to find organizations that see international operations as critical to the organization's overall success and have a high degree of interdependence between domestic and international operations. These organizations respond to local market needs while integrating global operations for organizational effectiveness. A manufacturing company that produces and markets products to the specifications of numerous countries while allocating production and purchasing supplies to take advantage of world market differentials would fit here. Long range goals and objectives reflect the expectation that the importance of international operations to the organization would remain constant or grow.

Some of the indicators of the degree of criticality/instrumentality include the following questions.
How important are non-domestic markets and suppliers to the success of the organization? What do the mission and goals say about the international operations? What proportion of the revenues/profits are tied to international operations? What is the degree of interdependence between the organization's domestic and international operations? These can range from contracts of limited scope and duration to significant corporate investment in many countries. Are the planned relationships between the organization and it's
international operations/partners short term or long term?

After careful assessment of the importance of international operations to the organization's mission, goals, and objectives, it is time to move to stage 2, decisions.

The position of an organization on the criticality/instrumentality continuum in stage 1 will shape the nature of international assignments within the organization. Those that are very low in stage 1are far more likely to limit assignments to short terms and give expatriates limited responsibilities. They are also more likely to place heavier reliance on host country nationals and third country nationals than organizations on the very high end of the scale. They may outsource significant parts of their international operations to host country companies. The higher the organization's position on the criticality/instrumentality scale, the more likely it is to have expatriate positions of longer term (3 to 5 years) and greater responsibility in addition to a greater number of positions at a variety of positions on
the scope and term of assignments continuum. If the perceived importance of the international operations is high, the organization should provide a variety of opportunities for it's employees to gain international experience, starting early in the employees careers so that they are better prepared for the longer term.
assignments with broad responsibilities later in their careers. Additionally, international expertise and experience should be factored into career ladders and expectations for managers in companies that are higher on the continuum in stage one.

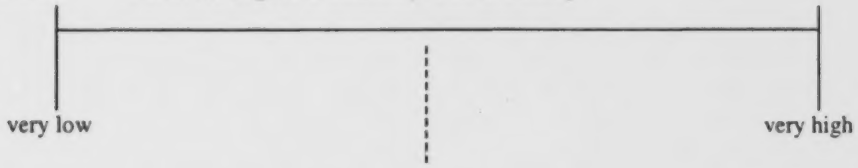
Stage 3 focuses on the organization's decision related to the preparation for and support of the expatriate. Decisions here will be based upon the importance of international assignments to the organization's overall mission and goals and the nature, duration and type of the particular assignment. On the low end of the scale might be a short term technical assignment with narrow focus for which travel arrangements and local contacts are provided for the employee, who also receives a briefing related to the assignment itself. At the other end of the scale would be a multi year expatriate assignment with broad responsibilities, such as an operations manager for a production facility. One would expect the organization to provide a package including travel and relocation assistance for the employee and his/her family, plus a significant amount of training and preparation related to the assignment, and training in the language, culture, and business practices in the new location. Some language and cultural training may also be provided to the family. Additionally, repatriation will be supported by the organization, and the knowledge and skill gained by the expatriate during the assignment will be used by the organization upon repatriation. International assignments will be integrated into the career tracks within the organization

This model presents a systematic approach that ties human resource development to the mission and operations of the firm. Specific training decisions should be made only after the three stages have been completed. This process should be an integral part of any high performance human resource system.

Figure 1 Organizational Decision Making Model for International Staffing

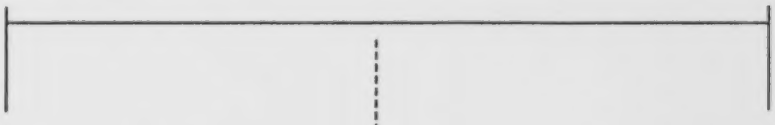
Stage 1 : Determine the importance of international operations to the organization's mission and goals.

Continuum: Perceived degree of criticality/ instrumentality



Stage 2: Determine the Nature of International Assignments

Continuum: Scope and term of assignments



- short term
- focused responsibility

- long term
- broad responsibility

Stage 3: Determine Amount of Human Capital Investment

Continuum: Preparation for international assignments and integration of assignments into career development.

- minimal preparation for job specific assignment
- travel assistance

- extensive preparation and support for assignments
- international assignments integrated into career tracks within organizations

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Managerial Practices to Facilitate Learning Within Learning Organizations

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This paper reports some of the findings from a larger qualitative critical incident study that was designed to investigate the multiple ways managers facilitate the learning of their employees when they perceive themselves to be facilitators of learning. Managerial beliefs which undergird behavior, the catalysts for learning, and the outcomes associated with learning were also examined, however, only the findings associated with managers' behaviors will be presented.

Keywords: Learning Organization, Coaching, Facilitating Learning

Many organizations are being challenged to remain competitive in a turbulent global business environment through continuous innovation, knowledge creation, and sustained organization-wide learning (Nonaka, 1991; Senge, 1990a; Watkins & Marsick, 1993, 1996a, 1996b). Given this challenge to create learning organizations, several scholars have articulated the need for empirical research on how managers can build learning capability (Ulrich, Von Glinow & Jick, 1993), and the management practices and their configurations that can help to guide managers in their efforts to build learning organizations (Slater & Narver, 1994).

At the heart of the learning organization is the enhanced capacity for continuous learning (Watkins & Marsick, 1993). Continuous learning represents an integration of formal and informal learning. Although trainers and human resource developers have traditionally been charged with providing formal learning, several scholars and practitioners are suggesting that trainers and human resource developers will become consultants, and designers of learning interventions. The learning organization literature has also speculated that managers will be challenged to assume roles as teachers (Senge, 1990a, 1990b; Wisdom & Denton, 1991) coaches (Conger, 1993, Evered & Selman, 1989; Frohman, 1978, Marsh, 1992, McGill & Slocum, 1998; Slater & Narver, 1995), educators (Antonioni, 1994), and facilitators (Weaver & Farrell, 1997). Watkins and Marsick (1992, 1993) contend that "human resource developers can extend their impact in almost exponential fashion by working with all employees to make self-managed learning more effective and by creating new ways for people to share what they learn" (p. 21). At the same time, they can work with managers to create a culture for learning, and help build the infrastructure for learning. Additionally, they can provide coaching and train-the-trainer expertise to managers who will increasingly have the task of providing training and development to their employees (McLagan, 1996; Ulrich, Brockbank, Yeung & Lake, 1995; Watkins & Marsick, 1993). This trend represents a shift away from formal instructor provided training and development to informal, just in time learning which is integrated with work. Despite all of the conceptions and descriptions of these changing roles for managers, little empirical research has examined the dramatically altered realities of managerial work (Kanter, 1989). Therefore, the purpose of this study was to examine the multiple ways that managers facilitate the learning of their employees when they perceive themselves to be facilitators of learning within learning organizations (Ellinger, 1997). Although four research questions guided the overall study, the following question is addressed in this paper:

(1) What are the types of behaviors that contribute to the role of managers as facilitators of learning?

Conceptual Framework

An adaptation of the Campbell, Dunnette, Lawler, and Weick model (1970) and Clawson's (1992) Person-Role Model formed the conceptual model which served as the framework for the study. The Campell et al. model, the person-process-product model (Morse & Wagner, 1978), is a heuristic model which is a schematic portrayal of factors determining the expression of managerial behaviors. The person in this model refers to an individual enacting a role. This person brings belief systems that are influenced by the individual's characteristics, abilities, and developmental experiences to the role he or she is stepping into. The process refers to the person's on-the-job behaviors and activities, and the product refers to the outcomes associated with enacting the behavior. The Campbell et al. model makes it apparent that the person's behavior is directed by many different factors and by the interactions between them. Clawson's model differs slightly in that she suggests that multiple behavior types inform the delineation of a person's role.

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For this study, within the context of learning organizations, the managers' belief systems are thought to influence the manager's adoption of the role of facilitator of learning. In adopting this role and serving as a facilitator of learning, it was thought that managers engage in learning episodes with their employees that are initiated by catalysts for learning. Once a learning episode is initiated, it was thought that managers would execute behaviors that could be categorized into behavior types that help to define the role of facilitator of learning. It was anticipated that outcomes would be associated with the learning episodes for learners, managers, and possibly the organization. This model was furnished as a point of reference, a framework for the study, but was not empirically tested.

Methodology

The design of the research study was a descriptive qualitative approach using the Critical Incident Technique (Flanagan, 1954) and semi-structured interviews (Kvale, 1996) as the primary methods of data collection.

In Action: Creating the Learning Organization (Watkins & Marsick, 1996b), a casebook published by the American Society for Training and Development served as the population from which a purposeful sample of five organizations was drawn using intensity sampling selection strategies (Patton, 1990). Four organizations actually participated in the study, and through an expert nomination process, twelve managers were recommended to the researcher as being exemplary facilitators of learning within their respective organizations. The twelve managers agreed to participate in the study, and in-depth face-to-face interviews were conducted with each manager which averaged at least two hours in length. The managers were asked to describe at least four effective and/or ineffective critical incidents when they perceived themselves to be facilitating their employees' learning. The interviews were tape recorded and transcribed verbatim by the researcher. An average of 4.6 incidents was collected from each manager which resulted in a total of 56 critical incidents.

Content analysis was employed to initially analyze the data (Weber, 1990). The unit of analysis was the critical incident, and the sentence was selected as the unit of analysis among content coding unit options within the critical incidents. All sentences within the data set were rigorously reviewed and those meeting the framework category definition of 'behaviors' formed this category. A total of 322 sentences, or data strips were identified that met the definitional criteria for 'behaviors.' Then, using a file card approach recommended by Guba and Lincoln (1981), the data strips in this category were thematically classified using open coding (Strauss & Corbin, 1990). To ensure internal consistency, member checking was employed (Merriam & Simpson, 1995). Additionally, an external reviewer with fifteen years of managerial experience also participated in the coding process. The researcher and external reviewer sorted the file cards independently. The results of the open coding process were recorded and compared. Although there was general consistency among the themes that emerged, multiple sorts were done to reconcile minor discrepancies until complete consensus was achieved between the researcher and external reviewer. This process helped to establish reliability in coding of emergent themes to achieve semantic validity (Weber, 1990).

Findings and Discussion

A total of three hundred twenty two (322) data strips coded as behaviors (37.2% of the total number of data strips) were identified within the entire data set which consisted of a total of eight hundred sixty-six data strips (866).. These behaviors represented actions, or sets of actions that the manager employed when he/she was engaged in facilitating learning. Thirteen (13) themes emerged within the framework category of behaviors and formed two clusters of behaviors. These themes represent types of behaviors, or sets of behaviors that managers enacted as facilitators of learning. Figure 1 depicts these two clusters and the thirteen behavior sets which define the role of facilitator of learning for this study. Based upon the data, these behavior sets may be operationalized as managers' empowering behaviors and their facilitating behaviors. These behavior sets were observed consistently in the critical incidents reported by all of the managers in the study, not only those managers affiliated with learning organization initiatives for the longest period of time. It is important to note that 'coaching' was used synonymously with 'facilitating learning' by 11 of the 12 managers participating in the study, therefore, their 'coaching' terminology is used in this paper.

Clusters of Behavior Sets	
Empowering	Facilitating
Holding Back -- Not Providing the Answers	Creating and Promoting a Learning Environment
Question Framing to Encourage Employees to Think Through Issues	Broadening Employees' Perspectives -- Getting Them to See Things Differently
Transferring Ownership to Employees	Stepping Into Other to Shift Perspectives
Being a Resource -- Removing Obstacles	Using Analogies, Scenarios, and Examples
	Setting and Communicating Expectations -- Fitting into the Big Picture
	Working It Out Together -- Talking it Through
	Engaging Others to Facilitate Learning
	Providing Feedback to Employees
	Soliciting Feedback from Employees

Figure 1. Clusters of behavior sets associated with the role of facilitator of learning
Source: Ellinger, 1997

Although it can be argued that managers who adopt and assume the role of facilitator of learning, or coach still maintain the potential to exercise considerable control over their employees because of the position and authority power they possess, this study suggests that managers attempt to facilitate learning for their employees by moving toward an empowerment paradigm which is demonstrated in the empowering behaviors they enact. In this study, facilitators of learning used both empowering and facilitating behaviors with their employees. As Figure 1 depicts, managers enacted four types of Empowering behavior sets and nine types of Facilitating behavior sets when they perceived themselves to be facilitating learning. Grounded in the data, the cluster of Empowering behavior sets referred to managers' behaviors that appeared to encourage employees to assume personal responsibility and accountability. Managers alluded to not providing solutions or answers to employees, and often responded to questions by asking different, thought provoking questions to encourage their employees to derive their own solutions. Whereas the Empowering cluster was predominantly oriented towards managers' behaviors of giving more power and authority to employees, the cluster of Facilitating behavior sets was slightly different. In this cluster grounded in the data, the notion of Facilitating behaviors appeared to be oriented towards managers' behaviors that promoted new levels of understanding, new perspectives, and offered guidance and support to their employees to foster learning and development.

The emergence of these thirteen behavior sets is significant because most managerial behavior taxonomies have captured the more formal aspects of training and instructing subordinates associated with the concept of facilitating learning (Borman & Brush, 1993; Kraut, Pedigro, McKenna, & Dunnette, 1989; Mintzberg, 1973, 1990; Yukl, 1981, 1989, 1994). Aside from suggesting that managers engage in behaviors that coach, mentor, train and develop employees, few, if any of these taxonomies have provided specific descriptions of the actual behaviors that are manifested in coaching, mentoring, training and developing employees.

The behaviors that managers reported they enacted when they perceived themselves to be serving as facilitators or learning, or coaches were somewhat different from the traditional components of coaching models that have been reported in the literature. Traditional coaching models generally incorporate the concept of interactive communication in which the coach listens, gives feedback, and clarifies expectations of the employee (Evered & Selman, 1989). Schelling's (in Graham, Wedman, & Garvin-Kester, 1993, 1994) research identified eight coaching skills that included communicating clear sales objectives, providing regular performance feedback, and providing help, training, and guidance. While many of the approaches to coaching in the literature are oriented to problem solving and performance improvement, the findings from this study are distinct in that they focus more on the learning component from which improved performance appears to be a by-product.

The specific behaviors in this study that are similar to some of those behaviors or skills identified in the coaching literature include "setting and communicating expectations -- fitting into the big picture," and "providing feedback to employees" (Evered & Selman, 1989; Graham, Wedman, & Garvin-Kester, 1993, 1994; Marsh, 1992; Yukl, 1994). Yukl's (1994) guidelines for coaching include explaining why additional training is relevant, and encouraging application of skills on the job. His guidelines for mentoring include encouraging enrollment in

relevant training programs, providing special opportunities for skill development and helping the employees learn from experience. Despite some of the similarities with Yukl (1994), there were distinguishing factors associated with "setting and communicating expectations -- fitting into the big picture" and "providing feedback to employees" in this study. Setting expectations in this study also included the concept of communicating the importance of these expectations and objectives so that employees would understand why objectives were important and how their efforts in meeting objectives impacted the organization. This idea of managers explaining how employees fit into the big picture was a subtle, but important difference.

Despite the emergence of the concept of giving feedback which is typically a component in most coaching models, in this study, three variations of providing feedback were reported by managers: observational, reflective, and third-party feedback. Managers provided observational feedback in which they related observing behavior that could be detrimental to the employee, or provided feedback in terms of performance reviews about observed strengths and areas for future development. Managers also engaged in providing reflective feedback in which they 'held the mirror' so that employees could make their own assessments about how their behavior impacted others within the organization. The third type of feedback managers provided was third-party feedback in which managers would solicit feedback from the employee's internal customers, or through anonymous survey feedback instruments that the manager and employee would create together. Another distinct behavior included soliciting feedback from their employees to gauge if employees were having problems or were comfortable performing their work related tasks. Orth, Wilkinson and Benfari (1987) use the terms of coach and mentor interchangeably, however, they contend that coaches and mentors must have observational skills to monitor an employee's performance. This skill set is most closely aligned with the concept of observational feedback in the current study.

Orth et al. (1987) contend that mentors also need to possess interviewing skills in which they ask open-ended, closed, and reflective questions to employees to encourage the employees to think, or rethink what he or she may not have considered previously. Similarly, behaviors reported by managers in the current study related to the themes of "question framing to encourage employees to think through issues" and "using analogies, scenarios, and examples" to facilitate employees' learning. Rather than providing solutions, managers in the current study would frame and pose questions to their employees to encourage them to think through solutions themselves. Generally, the types of questions managers posed related to having employees consider the potential consequences of their actions, or to anticipate the results of their actions within specific contexts. Providing examples and analogies were used to help employees see how similar approaches could be applied in their own circumstances, without the managers directing or imposing specific solutions.

Three additional behaviors which managers enacted included "holding back -- not providing the answers", "being a resource -- removing obstacles" and "transferring ownership to employees." Although these behaviors would appear to be implicit in the concept of coaching, managers in this study specifically made it clear to their employees that they would provide help, but would not assume the employees' responsibilities. Managers specifically indicated that they would not provide answers, and would not perform employees tasks.

Hout and Carter (1995) and Barlett and Ghoshal (1995) have suggested that the task of management is to adopt a people-oriented approach to management, and that relationships and communication will become increasingly important within organizations. The theme of "working it out together --- talking it through" corresponds to their findings as managers in the current study engaged in one-on-one or work group based conversations designed to talk through issues and reach consensus about the overall approach. Managers acted in highly facilitative capacities when they engaged this type of behavior to facilitate learning.

Two additional themes new to the coaching literature include: "stepping into other to shift perspectives" and "broadening employees' perspectives -- getting them to see things differently." These behaviors are significant because they connect to the organizational learning literature and the learning organization literature. Senge (1990a, 1990b) and Argyris (1977) acknowledge that surfacing mental models and closely held assumptions can facilitate individual learning. Senge would suggest that leaders in the learning organization have a responsibility to surface and test mental models to facilitate individual learning which then has the potential to effect the organization more broadly. Smiley (1992) has suggested that managers should become schemata modifiers. Engaging in these behaviors may help managers to understand why employees behave as they do, and ultimately help to change their cognitive processes. Managers attempted to encourage employees to step out of their own mental frames and step into another person's mental frame. This was done to encourage employees to think differently from a perspective other than their own. This type of behavior was also used by managers to view the world from the employees' perspectives. This theme of "stepping into other to shift perspectives" differs from "broadening employees' perspectives -- getting them to see things differently" in that the behaviors managers engaged to broaden employees perspectives included providing exposure to other facets of the organization through work rotations and other activities.

A final theme reported by managers was "creating and promoting a learning environment." This theme corresponds to the literature on the learning organization in which managers are encouraged to create continuous learning opportunities, and establish systems that capture and share learning (Watkins & Marsick, 1993, 1996a, 1996b). Here, managers reported their activities as attempting to build learning departments by actively engaging in department meetings, fostering mentoring relationships among employees, and creating informal learning opportunities such as job matrices and participation in interview processes.

Some of the behaviors that managers articulated when they served as facilitators of learning are variations of some of the components that have been identified within existing coaching models. However, collectively these behaviors present a detailed view of how coaching can be facilitated informally in organizations by managers. These behaviors add a deeper dimension to existing managerial taxonomies and further elucidate what is meant by the broad terminology of coaching.

Limitations

There are several limitations to this study that should be addressed. One of the limitations of this study was obtaining managers' perceptions of the behaviors they enacted when they perceived themselves to be facilitating learning using the critical incident technique. It is possible that employees may disagree with their managers' perceptions. However, the intent of this qualitative study was to seek understanding of this phenomenon from managers perceived to be exemplary facilitators of learning based upon their perceptions of the ways in which they facilitate the learning of their employees. This study is also a purposeful sample of twelve managers, therefore, generalizability is limited and this study does not purport to address all of the factors associated with how managers can build learning organizations. Lastly, the number of critical incidents collected is adequate for an exploratory study, however, expanding the sample size and volume of critical incidents is recommended to further develop the classification system.

Contributions and Future Research

This study provided insight into the ways in which managers facilitate the learning of their employees in learning organizations. Despite some of the limitations, there are several implications for practice and research.

Implications for Practice

This study is relevant to the management, adult education, and human resource development fields for a number of reasons. The learning organization literature has speculated that managers and leaders' roles will continue to change in organizations seeking to become more learning oriented. Therefore, as managers and leaders assume roles that include more teaching, coaching, education, and development responsibilities, trainers and human resource development practitioners traditionally responsible for such training, coaching, and development functions may no longer be considered the sole providers of these services, but part of a much broader learning infrastructure. As a result, it is possible that an increasing number of the adult educators, trainers, and developers in the workplace will be managers and leaders. Watkins and Marsick (1992, p. 128) have acknowledged that "experiments in teaching managers to be facilitators, coaches, interpreters and guides hold promise." This study provides trainers and human resource development professionals with thirteen behaviorally grounded behavior sets that help to define the role of facilitator of learning which can be used within organizations to help managers become more skilled at facilitating learning. These behavior sets can be integrated with existing coaching models, and incorporated into the content of management development programs.

Implications for Research

The findings from this study extend the current research on managerial behaviors in learning organizations. Additionally, these findings extend the existing research on managerial behavior taxonomies by providing a micro-level investigation of behaviors that are manifested in coaching, or facilitating learning by exemplary managers participating in this study. There is a growing body of literature on coaching, however, it tends to be atheoretical (Popper & Lipshitz, 1992), and only a few empirical studies have been conducted which examine what good coaches do, and the relationship between preferred models of coaching and improved performance (Graham,

Wedman, & Garvin-Kester, 1993, 1994; Marsh, 1992). This study fills this void by providing researchers and practitioners with thirteen behavior sets that define the role of coach, or facilitator of learning. Some of these behavior sets represent components of existing coaching models, however, a few new behavior sets expand the concept of coaching.

The critically anchored behavior sets identified in this study offer a foundation upon which other researchers can build so that the management practices required to build learning organizations can be expanded. To overcome some of the limitations of this research, the researcher recommends that future research include using manager and employee dyads as an approach to obtaining critical incidents so that employees' perceptions of the ways in which their managers may facilitate learning can also be incorporated into the behavior sets that define the role of coach, or facilitator of learning. Expanding the number of participating managers and organizations to generate a larger number of critical incidents may also be a way to further develop a richer classification of behavior sets. Ultimately, incorporating these behavior sets into a survey instrument to assess how pervasive coaching is, and the predominant behavioral strategies used by managers in a broader array of corporations would be a logical next step.

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Operationalizing the Organizational Model of Managerial Employee Persistence

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This paper identifies the processes utilized to validate The Organizational Model of Managerial Employee Persistence (Peterson, 1998) which focuses on the role of the organization in integrating employees into the organization, and in turn, is hypothesized to impact their persistence. The Organizational Integration Survey (OIS) for Managerial Employees was developed to operationalize the Model, providing Human Resource Development professionals with a theoretical foundation for expanding their role in the organization-- developing strategies to increase managerial employee integration.

Keywords: Employee Turnover, Organizational Integration Survey, Managerial Persistence

The Organizational Model of Managerial Employee Persistence (Peterson, 1998) was developed to explain managerial employee turnover, particularly that of women and managerial employees of color. This model integrates key components of an organizational model of student attrition (Tinto, 1986) and a variety of employee turnover models (Bannister & Griffeth, 1986; Blau & Boal, 1989; Dalessio, Silverman, & Schuck, 1986; Dougherty, Bluedorn, & Keon, 1985; Hom, Griffeth, & Sellaro, 1984; Lee & Mitchell, 1994; Mobley, 1977; Mobley, Horner, & Hollingsworth, 1978; Steers & Mowday, 1981). What the employee turnover models have in common are the variables job satisfaction and commitment to the organization. These variables serve as major constructs for much of the theory building and research on employee turnover. Thus the traditional employee turnover models focus on attributes of the individual employee. However, those models tend to neglect the importance of the role of the organization in the decision of employees' to stay with or leave the organization. Peterson's (1998) model acknowledges the key individual attributes of employees identified in the traditional turnover models, but focuses on the role of the organization. The Organizational Model of Managerial Employee Persistence suggests that the organization assumes a major responsibility for creating an environment in which employees perceive a connectedness with the organization to the extent that they intend to persist.

This paper identifies the processes utilized to validate the Organizational Model of Managerial Employee Persistence (Peterson, 1998) and describes the development of the survey instrument that will operationalize the model. The theoretical foundation for the model and the first iteration of the model is presented, followed by the processes used to operationalize the model, specifically the development of the survey instrument, establishment of a panel of experts, and analysis of the results of the group feedback session. The refined version of the Organizational Model of Managerial Employee Persistence is presented with plans for testing the model. Finally, implications for Human Resource Development practitioners are offered.

Theoretical Foundation

The theoretical foundation on which the model is based is a student attrition model (Tinto, 1986) that has been validated in a variety of settings, confirming the role of the educational institution in creating an environment in which students perceive that they are integrated into both the academic and social systems of their institution of higher learning. Integration refers to one's sense of connectedness to or belonging in one's organization, developed through experiences in and interactions within the organization. Tinto's (1986) academic attrition model was reconceptualized to acknowledge the role of the external environment (family, friends, employer), particularly for adult learners, in contributing to academic persistence (Schwartz, 1990). It was later determined that a student's career decision-making self-efficacy (confidence in one's ability to engage in information-gathering and decision-making regarding a career) significantly contributed to both social and academic integration (Peterson, 1993) and ultimately to persistence (Peterson & delMas, 1996). It is integration, along with intention to persist which has been found to be the most significant determinant of students' decisions to persist in or depart from their institution. Transferring those findings to an organizational setting to explain employee turnover led to the development of the Organizational Model of Managerial Employee Persistence (Peterson, 1998). The purpose of that model was to integrate employee turnover models (which focus on individual attributes) and the student attrition model (which focuses on the role of the organization) to create a model that would result in a stronger explanation of the variance

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in employee turnover. The hypothesis is that employees who perceive they are integrated into the organization are more likely to persist.

Operationalizing the Organizational Model of Managerial Employee Persistence

The following processes were utilized to develop the Organizational Integration Survey for Managerial Employees which is intended to operationalize the Organizational Model of Managerial Employee Persistence:

1. Development of a draft of a survey instrument with which to measure each of the constructs represented in the model.
2. Establishment of a panel of experts to review and validate the model and draft of the survey instrument and participate in a group feedback session.
3. Analysis of the results of the group feedback session.

Survey Development

Many of the items from the Integration Scale, adapted from Fox (1986) and the Career Decision-Making Survey, adapted from Taylor and Betz (1983) utilized in the Peterson (1993) study which focused on academic and social integration in an institution of higher education adapted to the current survey. For example, questions relating to friendships with other students where adapted to include relationships with co-workers. Questions from the Career Decision-making Survey were adapted to measure the managerial employees' level of confidence in their ability to gather information and make decisions about their careers as well as to measure employees' perceptions of the organization's support for their career development.

Given that base, additional questions were developed for each of the domains of the model. New questions were developed based on turnover literature and from the researchers' experiences in organizations. Each question went through multiple revisions as the survey was restructured and reorganized to represent each of the domains. Approximately 100 questions were included in the original draft of the survey instrument. The variables to be measured by the Organizational Integration Survey for Managerial Employees represent the components of the model and include the following:

- Pre-entry Attributes

Pre-entry attributes reflect the demographic and psychological dimensions of employees prior to joining the organization. These attributes reflect personal characteristics and include demographics, abilities and skills, and career decision-making self-efficacy.

Demographic information (Section I.A. of the survey) includes such characteristics as age, race, gender, and national origin. Abilities refer to educational level and training of employees upon entry into the organization; skills refer to employees' prior work experience (Section I.B. of the survey). Career decision-making self-efficacy (Section II. of the survey) refers to the level of confidence employees have regarding their ability to gather information and make career-related decisions.

- Expectations, Motivation, and Satisfaction (Time 1)

Expectations are the aspirations and valued occupational goals toward which one's activities are directed. Expectations, which predict the likelihood of attaining that desired future, are measured by intentions.

Motivation, often referred to in the context of personality disposition, is measured by goals and commitments. Motivation refers to one's willingness to work toward the attainment of those goals. Goals refer to employees' desired outcomes in the career field in general and within the context of a specific organization in particular. Commitment suggests a pledge of support for a decision made.

In general, satisfaction refers to that which brings gratification or contentment. The myriad factors within and outside an organization which comprise satisfaction are summarized in this model as a single overall satisfaction variable. Thus, Intentions, Goals, Commitment, and Satisfaction comprise Section III of the survey.

- Organizational Experiences

This section (Section IV. of the survey) refers to the experiences and interactions among employees within the organization over a period of time. Those experiences and interactions take place in several contexts, referred to as domains. The model suggests that those interactions take place both formally and informally. Formal experiences are purposely planned interactional events (e.g., formal lines of communication, policies, meetings). Informal experiences tend to be more spontaneous, perhaps serendipitous, opportunities to interact. Formal and informal dimensions are connected, as the opportunities for interactions overlap and often involve the same people (e.g., managers, peers). Thus formal may influence and be influenced by informal experiences and vice versa. Organizational Experiences are represented by the following domains:

Performance Domain. This domain (Section IV.A. of survey) identifies organizational experiences and factors that impact employees' perceptions of their level of performance in the organization. The Performance System includes Job Performance and Interactions with Managers. Factors include perceptions of stress, conflict, support of management, knowledge of job requirements, and performance recognition. Specifically, Job Performance refers to employees' perceptions of their level of performance and competence on the job. Interactions with Managers refers to employees' perceptions of the level of support, concern, and acceptance received from their own manager as well as other managers in the organization.

Organizational Domain. This domain (Section IV.B. of survey) identifies organizational experiences and factors that impact employees' sense of personal belonging in the organization. The organizational system includes opportunities for social interactions with peer groups and co-workers. Factors include organization-supported activities and social events, organizational support of personal development, and interactions and relationships, both personal and professional, among co-workers. Specifically, Social Aspects refers to perceptions of the level of organizational support for the social interaction and personal development of employees, as demonstrated by the type and scope of activities provided by the organization. Interactions with Co-workers refers to employees' perception of their belonging based on the scope and type of interactions between and among co-workers (other than one's immediate supervisor) and peers in the organization.

Career Domain. This domain (Section IV.C. of survey) refers to experiences and factors that impact employees' perceptions of their opportunities to create, develop, and embark upon a career path. Specifically, Information Gathering refers to employees' perception of their opportunities within the organization to obtain information about careers in general as well as information related to their specific career path. Decision-Making refers to employees' perception of opportunities to consider options and make decisions related to their career.

Extra-organizational Domain. The model also acknowledges the reciprocal impact of employees' external systems (e.g., family, community, friends) on the internal organizational system and the importance of organizational support to help employees balance this work, family, and community aspect of their lives. Specifically, External Support (Section IV.D. of survey) refers to the level of support that people outside the organization who are important to employees provide to the employees regarding their organizational responsibilities. Organizational Support refers to organizational experiences and activities that support the balance between organizational and external commitments, such as the employees' responsibilities to family, community, friends, education, military, and/or religious or spiritual affiliations.

- Integration

This variable is the central focus of the model and is measured by the survey. Integration refers to employees' sense of connectedness to or belonging in the organization developed through the experiences and interactions with the organization within the Performance Domain, Organizational Domain, Career Domain, and Extra-organizational Domain. If the results of those interactions are positive, it is expected that employees will perceive a greater sense of integration.

- Expectations, Motivation, and Satisfaction (Time 2)

While an employee comes to an organization with certain background characteristics, intentions, goals and commitments, and general levels of satisfaction, what experiences and opportunities for interaction the organization provides is hypothesized to impact the level of integration in each of the domains noted. Thus it is expected that employees' expectations, motivation, and satisfaction regarding their employment in the organization will develop over time. Thus, Intentions, Goals, Commitment, and Satisfaction comprise Section V. of the survey.

Persistence Outcome

The employees' developed intentions, goals, commitment, and satisfaction, together with integration (Performance Integration, Organizational Integration, Career Integration, and Extra-organizational Integration) will ultimately impact employees' decisions to stay in or depart from the organization. This variable will be measured at the end of six months.

Panel of Experts

Representatives from business and industry, comprising a panel of experts, were identified and asked to participate in a group feedback session regarding the Organizational Model of Managerial Employee Persistence and the Organizational Integration Survey for Managerial Employees described above. The finalized draft of the survey, together with a cover letter to identify the purpose of the group feedback session, a copy of the Organizational Model of Managerial Employee Persistence, and an explanation of each domain of the model were sent to each member of the panel of experts.

Representatives from the following organizations comprised the panel of experts: Ceridian, Norwest/Wells Fargo Banks, Cargill, Dayton Hudson Corporation, Norwest Funding Incorporated, Personnel Decisions International, and the Carlson School of Management at the University of Minnesota. The experts held such titles as Vice President of Human Resource Development, Director of Human Resource Development, Organization Development Specialist, and Regional Personnel Director.

Experts agreed to participate in a 90-minute group feedback session held in the Executive Development Center of the Carlson School of Management at the University of Minnesota. Participants were charged with the responsibility, having had the materials for two weeks prior to the group feedback session, to (1) eliminate repetitive or unnecessary questions, (2) reword ambiguous questions, and (3) suggest new questions for each of the domains within the Organizational Experiences section of the model. They also were asked to evaluate the model and provide feedback on the overall survey.

After the initial welcome and introductions, each participant was assigned a primary section of the survey and asked for the first 15 minutes to focus their notes, based also on their previous analysis, on that section. They were then broken into small groups representing their section of the survey, and asked to come to a consensus in 50 minutes regarding each question in that section. The whole group was reconvened for the final 20 minutes in order to (1) provide input into the other sections of the survey, (2) discuss the merits and shortcomings of the overall survey, and (3) question and critique the components of the model.

The researchers did not participate vocally in the feedback session, but recorded observations and took notes on the content of the discussions. In addition, notes from each of the participants in the panel of experts were collected.

Group Feedback Session

Notes from the individuals who comprised the panel of experts and the group feedback session were reviewed and analyzed. This analysis yielded information that resulted in deletions of questions, changes to current questions, and the addition of new questions. For example, questions within the Organizational Domain were added to address employees' perceived level of camaraderie in the organization. Some of the questions designed to address both personal and professional development issues within each of the domains were merged where to do so made sense. However, it also made sense to revise entire categories of the model for the express purpose of differentiating between those two aspects of development.

The general consensus of the panel of experts was favorable, and the feedback from the group session provided valuable information that allowed the survey to be shortened (one of the goals) without compromising the integrity of the domains that comprise the model. Thus the revisions to the model, while important, were minor.

Refinement of the Organizational Model of Managerial Employee Persistence and Revision of the Organizational Integration Survey for Managerial Employees

The revised Organizational Integration Survey (OIS) for Managerial Employees contains 86 items. Each section, except Section I (demographics) is based on a 5-point Likert Scale. The 86 items are categorized as follows:

- Section I. Personal Characteristics
  - A. Demographics-- 6 questions
  - B. Educational/Professional Experience-- 9 questions
- Section II. Career Decision-Making
  - A. Information Gathering-- 5 questions
  - B. Decision-Making-- 3 questions
- Section III. Intention, Goals, Commitment, & Satisfaction-- 5 questions
- Section IV. Organizational Experiences
  - A. Performance Attributes
    - Job Performance-- 9 questions
    - Interactions with Managers-- 10 questions
  - B. Organizational Attributes
    - Social Aspects-- 8 questions
    - Interactions with Co-workers-- 10 questions
  - C. Career Aspects
    - Information Gathering-- 4 questions
    - Decision Making-- 5 questions
  - D. Extra-organizational Aspects
    - External Support-- 2 questions
    - Organizational Support-- 5 questions
- Section V. Intention, Goals, Commitment, & Satisfaction-- 5 questions

Figure 1 includes a sampling of the 50 questions included in the Organizational Experiences section of the Organizational Integration Survey for Managerial Employees.

Performance Attributes	
Job Performance	*Interactions with Managers*
• I have been recognized for high level performance in addition to my performance reviews. • Overall, I believe I have the appropriate skills to perform in my position. • Others within this organization appear to be satisfied with my work.	• I would feel comfortable discussing work-related issues with my current manager. • I would feel comfortable discussing work-related issues with other managers above me. • My current manager generally is accessible.

Organizational Attributes	
Social Aspects	*Interactions with Co-workers*
• My current manager genuinely is interested in my *personal* growth and development. • This organization celebrates employees' achievements. • This organization sponsors work-related activities of personal interest to employees (e.g., professional seminars, wellness programs).	• It has not been difficult to meet and make friends with other employees in this organization. • There is a sense of camaraderie in this organization. • My co-workers and I support each other in reaching our professional goals.

Career Aspects	
Information Gathering	*Decision-making*
• There are *formal* opportunities to gather information about careers and/or career paths in this organization. • There are *informal* opportunities to gather information about careers and/or career paths in this organization. • This organization encourages employees to become knowledgeable about their careers in general.	• This organization has helped me make decisions regarding my career. • Employees in this organization are consulted about career decisions that affect them. • This organization has helped me achieve my career goals.

Extra-organizational Aspects	
External Support	*Organizational Support*
• People outside this organization who are important to me are understanding of my professional demands. • People outside this organization who are important to me help me balance my personal and professional goals.	• This organization supports employees in their endeavors to balance personal and professional responsibilities. • This organization is considerate toward the interaction between work, community, and family.

Figure 1. Sample questions from the Organizational Integration Survey (OIS) for managerial employees.

Testing the Model

The next phase of this research to operationalize the Organizational Model of Managerial Employee Persistence requires testing the survey. The pilot test will be conducted with managerial employees in a large Minnesota based organization. The pilot test will determine the preliminary reliability of the instrument. Given a large enough sample, exploratory factor analysis will be conducted to determine the cohesiveness of the constructs as they are currently identified.

Once the revisions from the pilot test and the factor analysis are complete, the survey will be administered to a all female managers, all managers of color, and a random sample of Caucasian male managers in 12 randomly selected Minnesota-based organizations, categorized by size. The survey will be conducted with two groups of managerial employees. The first group of managerial employees comprises newcomers to the organization who, in Phase 1 of the study, will complete the Pre-Entry Attributes and Expectations, Motivation, and Satisfaction sections of the survey. In six months, Phase 2 of the study, they will receive the Organizational Experiences Section to measure their level of integration as well as a repeat of the Expectations, Motivation, and Satisfaction Section in order to compare their intention, goals, commitment, and satisfaction at entry with their developed intention, goals, commitment, and satisfaction.

The second group of participants represent employees who have been with the organization for more than three months. These participants will receive the following sections of the survey in Phase 1: Pre-Entry Attributes, Expectations, Motivation, and Satisfaction, and Organizational Experiences. In six months, Phase 2, they will receive a repeat of the Expectations, Motivation, and Satisfaction Section. During the six months of the study, every effort will be made to contact respondents who depart from the organization in order to collect Phase 2 data.The revised Organizational Model of Managerial Employee Persistence is shown in figure 2:

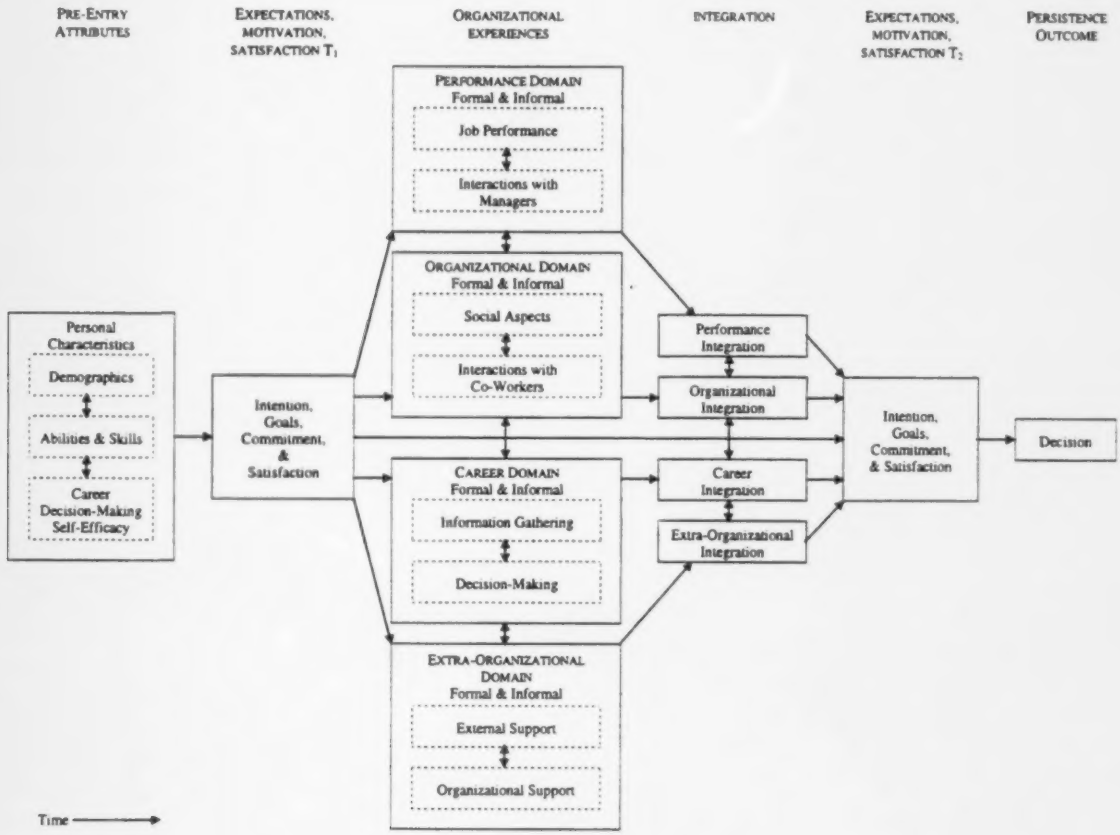
Implications for Human Resource Development

The Organizational Integration Survey for Managerial Employees was developed to operationalize the Organizational Model of Managerial Employee Persistence. The survey included personal characteristics and elements of traditional turnover models, particularly intentions, goals, commitment, and satisfaction, as well as items to measure the perceived level of performance integration, organizational integration, career integration, and extra-organizational integration, each a function of the composite role of the organization. Results of the survey, if found to be reliable, could have implications for the Organizational Model of Managerial Employee Persistence, particularly its applicability in explaining an employee's perceived level of integration in the organization, which in turn is expected to impact the employees' decisions to persist in or depart from the organization.

Pending successful research outcomes, Human Resource Development professionals will have a theoretical foundation for expanding their role in the organization to develop strategies to increase managerial employee

integration. Thus the outcome is an alignment between the goals of human development and those of the organization by contributing to increased managerial employee persistence and decreased turnover.

Figure 2. Organizational Model of Managerial Employee Persistence



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Critical Thinking, Developmental Learning, and Adaptive Flexibility in Organizational Leaders

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Organizational leaders in today's global marketplace must continually make decisions, solve problems, and chart effective courses of action to ensure that their companies survive and flourish. The ability to think critically is essential for today's leaders, yet leaders are often unable to do so. This study examined how developmental learning and adaptive flexibility relate to the level of critical thinking in a sample of organizational leaders. Results showed years of education to be the only significant predictor of critical thinking in the leaders studied. Adaptive flexibility scores indicated minimal levels of reflective observation suggesting automatization of decision-making. The factor analysis of developmental learning experiences identified several factors that characterize the developmental learning of the leaders studied. The theoretical and practical significance of the findings is discussed.

Keywords: Critical Thinking, Leadership Development, Workplace Learning

Critical Thinking

Critical thinking is reasonable, reflective thinking that is focused on what to think or do. It requires an ability to recognize problems, gather pertinent information, interpret data, appraise evidence, and to evaluate lines of thinking, points of view, and personal insights that might contribute to the framing of logical, effective, reality-based action (Pierce, 1990). Research on critical thinking describes how individuals think about and solve complex problems. Critical thinking cuts to the heart of effective managerial work. A leader with critical thinking abilities will make better decisions and effect action of enlarged scope and heightened quality (Neumann, 1989).

Workplace Developmental Learning Events

John Dewey's (1916) early work on cognitive development suggests that challenging and/or disorienting experiences stimulate the development of thinking ability. In numerous studies of successful leaders researchers at the Center for Creative Leadership (CCL) in Greensboro, NC, have determined that developmental learning occurs primarily through work experiences, not in formal training programs, and that successful corporations emphasize job challenge for developing managers (McCall et al., 1988; McCauley, Ruderman, Ohlott, & Morrow, 1994). In fact, the "developmental potential of a work experience is driven by the challenges it presents" (McCall et al., 1988, p. 8). Successful leaders' careers are marked by a variety of specific challenging work assignments and disorienting experiences, like starting an operation from scratch, making a huge leap in scope of responsibility, or turning around a business in deep trouble. This study hypothesized that challenging workplace learning events would stimulate the development of critical thinking skills.

Adaptive Flexibility

The "high-tech" arena of the global marketplace requires that organizations be able to respond flexibly to rapid changes in conditions and circumstances. For this reason, contemporary organizations need leaders who can adapt to and learn from the challenges encountered when confronting change. In his theory of integrative development, Kolb (1984) states that the ability to respond flexibly to change has a strong influence on a person's adaptation and growth over the life span. This trait is called "adaptive flexibility." People with high degrees of adaptive flexibility are readily able to adapt their style of learning to the demands of the learning situation. An adaptively flexible

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leader can more successfully manage in the global marketplace than a leader who is not adaptively flexible (Payne, Bettman, & Johnson, 1993).

Based upon research conducted to date, variables associated with the development of critical thinking ability in leaders are intelligence, age, years of education, and years of experience, as depicted in the unshaded portions of the "Individual Characteristics" component of the diagram in Figure 1. This research study proposes the addition of an additional individual characteristic, adaptive flexibility (Kolb, 1984).

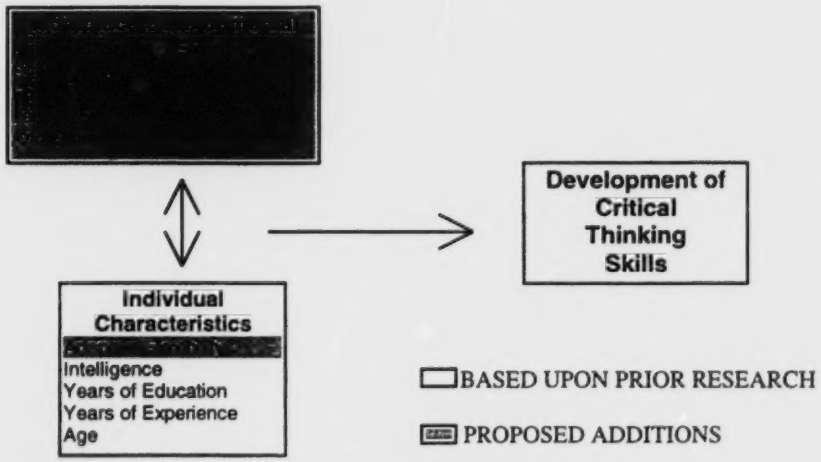

Figure 1. Framework of factors associated with critical thinking skills development.

The hypotheses tested were: 1) there will be no significant combination of independent variables: number of workplace developmental learning events, average perceived significance of workplace developmental learning events, and individual characteristics (adaptive flexibility, years of experience as a leader, years of education beyond high school, and age), that predict the level of critical thinking, 2) there will be no combination of factors that describe the workplace developmental learning events of the leaders studied, and 3) there will be no combination of workplace developmental learning factors that predict the average perceived significance of learning of the leaders studied.

Methodology

Three instruments were used to measure the study's variables. Critical thinking was measured by the Watson-Glaser Critical Thinking Appraisal (WGCTA) which consists of 80 items divided into five scales: inference, recognition of assumptions, deduction, interpretation, and evaluation of arguments (Watson & Glaser, 1980). Workplace developmental learning events were measured by an adaptation of "Section V: Your Background" of the Job Challenge Profile (McCauley, 1991) called the Experiences Checklist which measured the level of significance on a five point Likert scale of up to 43 workplace learning experiences. Adaptive Flexibility was measured using Kolb's (1980) Adaptive Style Inventory, a 48 item, forced-choice, self-report instrument consisting of four scales: concrete experience adaptive flexibility (CEAF), reflective observation adaptive flexibility (ROAF), abstract conceptualization adaptive flexibility (ACAF), and active experimentation adaptive flexibility (AEAF). A one page sheet that appeared as the cover to the Experiences Checklist assessed demographic variables. Instrument packets were distributed to 341 leaders who had attended CCL's five day Leadership Development Program during 1993; 119 leaders (35%) chose to participate in the study.

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Results

The research sample of 119 people consisted of 88 males (74%) and 31 females (26%). The mean age of study participants was 42.9 years (SD=7.2); average number of years of education beyond high school was 5.5 years (SD=1.9); mean number of years of direct supervisory experience was 12.3 years (SD=7.1). With respect to organizational level, 25 (21%) were executive-level managers and 93 (78%) were mid-level managers. The mean critical thinking score of 67 out of 80 (SD=7.3) placed this sample at the 85th percentile compared to a national sample of sales representatives. The average participant had experienced 22 of the 43 workplace developmental learning events assessed and considered the learning from these events highly significant. The average subject was moderately adaptively flexible, yet during learning or problem solving tended to engage in less than average reflective observation. The means, standard deviations, and intercorrelations for the variables critical thinking, developmental learning, and adaptive flexibility are summarized in Table 1. The intercorrelations between these three variables were low (r=-.11 to r=.08), indicating that the three variables are independent.

Table 1.
Total Sample Means, Standard Deviations, and Intercorrelations for Instrument Scales: Watson-Glaser Critical Thinking Appraisal (WG), Experiences Checklist (EC), and Adaptive Style Inventory (ASI) (n=119)

	Mean	SD	WG	EC	ASI
Watson-Glaser Critical Thinking Appraisal[a]	67.1	7.3	–	-.07	.08
Experiences Checklist[b]	21.8	5.1		–	-.11
Adaptive Style Inventory[c]	15.9	3.9			–

[a]Possible score of 0-80. [b]Possible score of 0-43 [c]Possible score of 0-32.

Hierarchical multiple regression was used to determine the independent variables that predict critical thinking skills in the leaders studied. The analysis showed that the only significant predictor of critical thinking score was years of education beyond high school ($r = .31$, $p < .001$). The regression analysis indicated that years of education accounted for 10% of the variance in critical thinking score ($p < .001$), a small effect size.

A factor analysis procedure with oblique rotation was used to determine the combination of factors that describe the workplace developmental learning events reported by the leaders studied. The factor analysis identified six factors that describe the reported workplace developmental learning events of the leaders studied: (1) Career Crisis, (2) High Stakes, (3) Management Development Opportunities, (4) Reduction Decisions, (5) Mentor or Role Model, and (6) Discrimination. Factors 1, 2, 4, and 5 resemble factors identified in several CCL studies (Eichinger & Lombardo, 1990; McCall et al., 1988; McCauley et al., 1994). Management Development Opportunities and Discrimination are new results.

The correlation matrix of the six factor scale scores and average perceived significance of learning showed significant correlations between High Stakes and average perceived significance (r=.27, p<.01) and between Management Development Opportunities and average perceived significance (r=.56, p<.001). A stepwise multiple regression showed that Management Development Opportunities accounted for 31% of the variance in average perceived significance rating, a large effect size.

Discussion

The results of this study support the results of previous studies of learning in leaders that concluded that the most important lessons are learned from on-the-job experiences (Baldwin & Padgett, 1993). The results of this study indicate that formal education was the only variable significantly related to critical thinking. This result supports previous research studies that found critical thinking correlated with education (Pearson, 1991). Both challenging workplace experiences and adaptive flexibility were not related to critical thinking.

With the lowered levels of reflection (i.e., low ROAF scores) responses to situations and dilemmas at hand may have been "automatic," reinforcing previous learning when the potential for new learning and development existed. The Watson-Glaser concept of critical thinking is narrowly focused and restricted. Results of this study show that WGCTA critical thinking is logic-based, single-loop (Schon 1987), instrumental and weak sense (Paul, 1984) critical thinking. Schon (1987) describes critical thinking as a process whereby the individual reflects on actions and

thought processes, calling into question underlying assumptions. A closer analysis of the items on the WGCTA shows that correct answers can be determined by the rules of logic. No reflectivity is needed.

Reflective judgment is a structurally based cognitive ability based upon levels of cognitive schema (King & Kitchener, 1994). Reflective judgment ability is necessary for solving ill-structured problems, e.g., the kind of real-life problems encountered in the workplace, particularly by challenging or disorienting experiences (King & Kitchener, 1994). Measuring reflective judgment rather than critical thinking may have been more appropriate to the purposes of this study.

Piaget (1972) uses the term schema or schemata to describe the framework onto which incoming sensory data can and must fit. Schema are mental maps that enable individuals to orient themselves within their experiential terrain. As an individual has new experiences the schematic framework constantly changes through activation of the assimilative/accommodative process. In this study there was no way of testing or measuring whether the 43 workplace learning events measured on the Experiences Checklist were truly developmental. To what degree the Experiences Checklist actually measured developmental learning is uncertain.

Conclusions

The results of this study provided only partial support to the model for developing critical thinking in organizational leaders proposed in Figure 1. Results of this study suggest that the development of critical thinking is a more complex process than that illustrated in Figure 1.

Based upon the results of this study and upon a follow-up review of the literature relative the study's outcomes, a revised model was developed that more accurately depicts the developmental learning process of leaders through workplace learning experiences. The framework encompasses the development of both critical thinking and reflective judgment.

Figure 2 illustrates the revised model for critical thinking and reflective judgment development in organizational leaders. The model consists of two paths or tracks: (1) a confirmatory relearning path corroborating an existing model of meaning, and (2) a developmental learning path resulting in a revised model of meaning.

Confirmatory Relearning

The confirmatory relearning process is triggered when the leader perceives a match between the current situation and past experience. The individual responds automatically and no "new learning" takes place. This is called the conduit effect (Sheckley & Keeton, 1997). The experience is constructed as a well-structured problem. Well-structured problems can be solved using critical thinking skills (King & Kitchener, 1994) and under stressful conditions (Fiedler & Link, 1994). The confirmatory relearning process results in corroborating the existing model of meaning.

Developmental Learning

The developmental learning process is activated when the individual perceives either a partial match or a mismatch between the current situation and past experience. The hierarchical structure of the individual's "world view" or "model of meaning" is abandoned or altered in some way. The reflective system is activated and new learning takes place. This is called the accordion effect (Sheckley & Keeton, 1997). If the current problem or circumstance is viewed as novel, the leader will construct the experience as an ill-structured problem with its attendant ambiguity and uncertainty. Ill-structured problems are best solved using reflective judgment (King & Kitchener, 1994) and under conditions of low stress (Fiedler & Link, 1994). The developmental learning process results in the creation of a revised model of meaning.

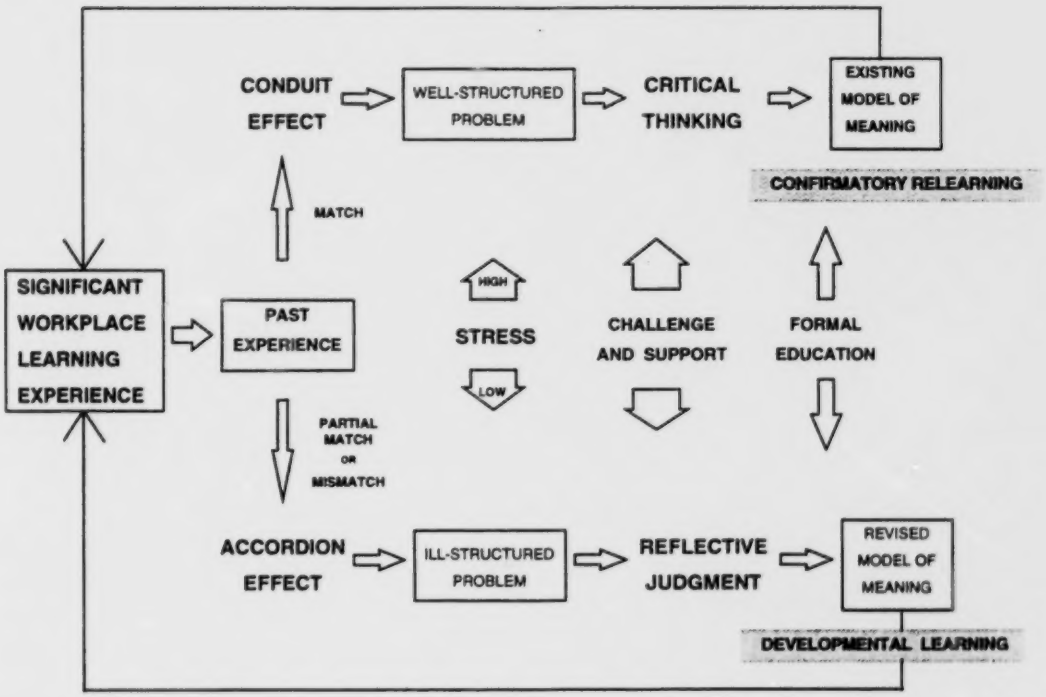

Figure 2. Revised model for critical thinking and reflective judgment development in organizational leaders.

Implications for Practice

The results of this study support the results of prior studies that concluded that significant learning for leaders comes from experience, from learning by doing the job, and from job challenges (Baldwin & Padgett, 1993; Lombardo & Eichinger, 1989; McCall et. al., 1988; McCauley, 1986; McCauley et. al., 1994). Giving challenging job assignments such as creating and managing change can create the conditions for significant learning and development.

Results of this study support Eichinger and Lombardo's (1990) contention that courses that focus on self-awareness are important to leader development. Seventy-six percent of this study's participants rated their learning from receiving feedback on their managerial style as very or extremely significant. Receiving direct feedback from peers, superiors, and subordinates can often trigger reflective learning.

Stress can negatively impact performance in leaders (Fiedler & Link, 1994). Creating a workplace culture that is supportive, is accepting of mistakes, and values well-thought-out decisions and strategies can reduce stress.

Encouraging the broader use of group discussion, reflection, and decision making can stimulate increased reflectivity in organizations, more adequate analysis of the issues, and better decisions. Also, encouraging leaders to look for the unique characteristics in a particular situation that may initially look mundane can often lead to new learning and to the choice of a more adequate course of action.

The type of reflection currently gaining popularity in organizations targets learning that results in increasingly effective action by individuals and groups. Reflection also leads to more objectivity, self-confidence, a heightened sense of personal responsibility, increased tolerance for ambiguity and paradox, the unlocking of creativity and intuition, enlightened action, and a more balanced life (Sherman, 1994). Learning to be reflective takes commitment, time, and effort. The sense of focus, clarity, contentment, and effectiveness that are demonstrated outcomes of reflectivity are worthwhile outcomes for organizational leaders to strive to achieve.

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Vital Work: Spirit and Development Within the Natural Workplace

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What happens when we reframe work as a fundamental site of human development? This research explores two organizations where development becomes not a function of training but a way of conducting work as a whole. This study illuminates the lived experience of people who work within "natural" or "vital" workplaces. The educative function of the workplace is explored and principles for vital work are identified and defined.

Keywords: Organizational Development, Vital Work, Meaning-Making

Adults today spend more of their time and energy engaged in work than in any other wakeful activity; for the adult, work is the central domain for learning and for the development of our human capacity (Jarvis, 1992; Kincheloe, 1995; Watkins, 1991; Welton, 1991). Research presents a clear interrelationship between the structure of our work organizations and the psychological qualities and attitudes of the people who work within them (Balawajder & Popiolek, 1996; Mortimer, 1988; Pauchant, 1995; Riordan & Griffeth, 1995; Watkins, 1991; Williams et al, 1997); the everydayness of work serves as a context and source of learning and of self-knowledge. Work is, as Welton (1991) describes, a fundamental training site for a participatory and democratic society.

Such a perspective of the workplace moves beyond traditional ideas about the education and training of workers to enhance corporate profit. Rather, it brings us to consider the workplace itself as a curricular structure, an educative environment (Dewey, 1938) with the potential to stimulate or enhance, to restrict or distort, growth and development. Yet this educative function of work has been a largely neglected theme in the field of human resource development (HRD). In our efforts to ensure we are making "value-added" contributions to organizational performance, we risk losing sight of our field's tradition: to further the development of humans and to promote the growth and welfare of the larger society (Friedlander, 1996).

This research explores two organizations where development becomes not a function of training but a way of conducting work as a whole, and illuminates the lived experience within these environments. The educative function of the workplace is explored and principles for vital work are identified and defined.

The Organization of Work

Contemporary Workplace Reforms

We are experiencing today a pace, breadth, and depth of change unseen in any previous chapter in workplace development in the Western world. Innovations that emphasize the importance of learning and of personal and collective development can be seen in the emergence of less authoritative structures and more collaborative and democratic work processes (for example Briskin, 1996; Dew, 1997; Dirkx, 1996; Kofman & Senge, 1993; Marsick, 1987). Such efforts to reinvent the corporation depict a struggle to establish a vision of work founded on a more clearly articulated set of humanistic values and constructivist models (Aktouf, 1992; Dew, 1997; Dirkx, 1996; Meltzer & Wickert, 1976): shared rather than unilateral power; autonomous work groups; diversity rather than conformity. Within the margins of such change lies an implicit recognition of the interrelationship of the subjective life of the worker and the objective conditions of work (Aktouf, 1992; Watkins, 1991; Welton, 1991). Yet in spite of new reforms, technical-rational approaches to work continue to be the norm and reforms retain a distinct positivist flavor (Ketchum & Trist, 1992; Kincheloe, 1995; Pauchant, 1995). Reforms are appropriated or sanctioned in order to enhance worker quality, commitment, productivity, or morale. The extent to which such reforms add value to the organization is embedded almost exclusively within a capitalistic framework (Briskin, 1996; Dirkx, 1996; Morin, 1995). Contradictions and paradox exist. With increased democracy, there are increased surveillance technologies. With open sharing of information, heated debate over office Internet access. With increased participation, restrictions on cubicle "prairie-dogging."

The worker continues to be conceptualized as an object ruled by causes, whose subjective experience is separated from the objective conditions of the workplace (Watkins, 1991). Research indicates that such a fragmentation results in an experience of work which constricts and distorts, rather than enhances and enlarges the human spirit (Aktouf, 1992; Watkins, 1991; Welton, 1991). This constitutes a miseducative experience (Dewey, 1938), a "false and stunted humanism" (Aktouf, 1992, p. 412). The centrality of work in our lives is generally

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relegated to work's role in creating a preferred lifestyle and there is little regard or consideration for how people develop, what people learn, what they come to know, outside the confines of sanctioned training.

The Natural Workplace

Reframing work calls for more than innovative strategies subtly inserted within the Taylorist paradigm (Aktouf, 1992; Block, 1997). It calls for deeper questions concerning our assumptions about the nature of work, how work is structured and organized, even the very purpose and meaning of work itself. In contrast to contemporary reforms, a "natural," more fully human workplace is emerging that ceases to artificially create, manage, appropriate or control the experiences of others (Aktouf, 1992; Semler, 1993). Grounded in a developmental view of work, the natural workplace appears to restructure the workplace around fundamentally different social, psychological, and economic assumptions. Named as radically humanist, democratic, mindful, conscious, even spiritual or soulful, this way of work is conceptualized as passionate, creative, nurturing, socially just, and more fully human, where profit and market share become not the goal but the by-product of vital or right work (for example Adams, 1984; Aktouf, 1992; Briskin, 1996; Clark, 1967; Dew, 1997; Dirkx & Deems, 1996; Fox, 1994; Hawley, 1993; Kofman & Senge, 1993; Meltzer & Wickert, 1976; Wenger, 1996; Whyte, 1994).

This sense of a more authentic, more fully human workplace appears to be qualitatively different than many other workplace reforms. The natural workplace is grounded in a particular view of human nature, a view supported within diverse bodies of literature (for example Aktouf, 1992; Dewey, 1938; Egan, 1994; Fox, 1994; Handy, 1994; Hawley, 1993; Jarvis, 1992; Kincheloe, 1995; Kofman & Senge, 1993; Moore, 1991; Pauchant, 1995; Wilber, 1995; Whyte, 1994). Primary to this view are the ideas that humans are (a) endowed with consciousness, right judgment, and free will -- we are actively involved in our own becoming; (b) fundamentally defined by our community and relations with others; (c) innately drive towards development and transcendence; and (d) share a common need for partnership and connectedness, for self-expression, and for meaning and purpose. Natural workplaces appear to structure and organize work in a way that facilitates the expression of this nature.

A growing body of literature (for example Bolman & Deal, 1995; Briskin, 1996; Fox, 1994; Hawley, 1993; Kofman & Senge, 1993; Whyte, 1994) presents an impressive picture of how work might be experienced within such environments: as vital, nurturing the human quest to embrace life fully with animation, meaningfulness, and purpose. Most of this work, however, consists of anecdotal evidence from proud CEOs (for example Fishman, 1996; Melrose, 1995; Semler, 1993). A relatively small body of ethnographic or anthropological research into more humanized workplaces or work units (for example Balawajder & Popiolek, 1996; James, James & Ashe, 1990; Massarik, 1976; Riordan & Griffeth, 1995; Schneider, 1990) describe a culture of work that embraces highly self-directed, participatory practices, community building, opportunities for friendship, recognized contributions, trust, and respect for humanity. They depict a strong corporate consciousness manifest by organizational members' engagement in the active processing of information, awareness of individual and collective strengths and weaknesses, awareness of the full environment in which the organization exists, and awareness of the interdependency of its systems (for example Massarik, 1976).

The idea of the natural workplace has been developed conceptually by numerous scholars, and the testimony of organizational leaders presents a rich and thought-provoking picture of what work might be. Within existing representations, however, there is a continued emphasis on the *perception* of work rather than on the *experience* of work (Briskin, 1996). There remains a distinct lack of research which presents the lived experience of workers within these sites, and we can only speculate on the extent to which people themselves experience these workplaces in an educative way. The purpose of this study is to explore how people experience and make meaning of the natural workplace, to build on our understanding of the qualities and characteristics of such an environment, and to investigate ways in which the natural workplace may contribute to growth and development.

Research Questions and Significance to HRD

This study explores the lived experience of people within two organizations working to create more humanistic, natural workplaces. It focuses on the nature of work and how people experience and make meaning of work within these environments. The following questions guided this inquiry:

1) How do workers experience and make meaning of organizational life within the natural workplace?
2) How is the natural workplace structured and organized? What are the qualities and characteristics of such an environment?

3) How and what do people learn, of themselves and of others, within the natural workplace? In what ways does the natural workplace facilitate growth and development of the individual and group?

Significance of the Research Problem

Argyris (1976, p. 405) described, "If the validity of the concept of the organization is to survive, the new designs will have to raise the level of the quality of life within the system and genuinely value high-quality living as much as efficiency." Conceptualizing the workplace as a fundamental site of learning and development offers this opportunity by creating experiences where "the purposes, driving forces, culture, behavior standards and results are more closely aligned to human needs, aspirations, and potential" (Koch & Godden, 1996, p. 173). An on-going and direct concern of organizational leaders lies with the objective conditions within the workplace in which interactions take place. Growing interest in such concepts as quality of work life, organizational learning and transformation, and work as vocation or calling, demonstrate a new focus on the establishment of working conditions that will "awaken in the worker the desire to work together in a spirit of community, creative energy, and meaningful purpose" (Aktouf, 1992, p. 419). The human spirit at work may be understood less as an object to be improved and much more as a force for collective creativity and innovation.

Human resource development practitioners are called to look more deeply into the ways in which the environment nurtures experiences that lead to growth, and how to utilize the physical and social environments "so as to extract from them all that they have to contribute to building up experiences that are worth while" (Dewey, 1938, p. 40). There is little agreement, however, as to what this means in a real and concrete way. This study contributes to our understanding of the workplace as a site for personal and organizational development, and illuminates conditions of work which are most conducive to a vital workforce. Developmental aspects of work will enhance our knowledge base of learning in terms of sociocultural, tacit, and self-knowledge. This study also contributes to our understanding of adult learning within the context of work as informal and incidental.

Research Methods

To understand another's experience, and to gain insights into the context which surrounds this experience, is to understand how a person makes meaning of a phenomenon. Meaning-making is the interpretive aspect of cognition and perceptions and, by definition, it is phenomenological (James, James & Ashe, 1990, p. 42). This study is grounded in Husserl's concept of phenomenology (as in Holstein & Gubrium, 1994; Moustakas, 1994; Sinha, 1969) a method that allows us to understand the ways the experiential world is produced and experienced by its members (Holstein & Gubrium, 1994).

Two midwest organizations participated in this study, having met the criteria for working towards a more natural work environment. This criteria were established based on a review of literature concerned with humanizing work environments (for example Fox, 1994; Hawley, 1993; Pauchant, 1995), and included:

- high levels of autonomy (e.g., use of participatory and democratic work processes, lack of dress code, and the commitment of the organization to an individual's personal goals);
- tolerance for ambiguity (e.g., lack of an employee handbook or task-specific job descriptions);
- relatively high levels of trust (e.g., lack of detailed policy and procedures, open leave policies, self-reporting time records, or full disclosure of financial information concerning organizational status);
- non-competitive recognition of employee contributions such as profit sharing plans maintained by employees;
- evidence of concern for the "whole" person (e.g., health/wellness facilities or programs, encouragement of educational development, social activities, or flexible time-off policies); and
- minimal hierarchical structure and evidence of individual power based on earnings or job title (e.g., office space determined by need rather than level of position, lack of reserved parking spaces, or open access to designated organizational leaders).

From these sites 20 self-selected people, representing a diverse mix of age, educational levels, gender, and positions within the organizations, participated as co-researchers. Data was collected through multiple methods including non-participant observation, document review, focus groups, unstructured field interviews, semi-structured interviews, and follow-up interviews. Information was recorded with the use of detailed field notes and audiorecordings. The participants/co-researchers also participated in the analysis and the writing of the findings through member checks and providing feedback to the primary researcher on the written narrative.

Data analysis consisted of three major stages (Moustakas, 1994): phenomenological reduction, imaginative variation, and synthesis of meanings and essences. Audiorecordings were transcribed verbatim and each transcript underwent a process of horizonalization, establishing meaning units and themes, development of individual textural and structural descriptions, and the synthesis of meanings and essences across cases. From this synthesis a composite textural-structural description was constructed, representing the shared essence of the work experience. The composite descriptions were presented to participants to ensure they represented an accurate and rich portrayal of their experiences and meaning-making within their workplaces. Accuracy and trustworthiness of the data (Lincoln & Guba, 1985) was ensured through on-going contact with participants, triangulation of data, member reviews, and peer review.

Findings: The Experience of Work

Findings reveal these more natural workplaces as relatively unstructured, with open books and open systems of communication, fluid work groups, high levels of autonomy, ample opportunities for friendship, and de-structured work processes. Being here is "vital" and animating involving a pace that is both draining and energizing, and filled with contradiction and paradox, conflict and uncertainty, high emotion and "fun." Participants structure the experience of work in five universal ways, described in their own words below: Self and Self-Other Relationships, Connectedness and Relatedness, The Role of Past Experience, Individual Differences, and Meaning in Work.

Participants fill their days with activity which moves them and the organization forward. The days are both "too long" and "not long enough." When the roller-coaster is in motion, people are tired and supportive, teasing and resentful, hopeful and frustrated, excited and angry. "Fully alive." Pushing to be their best often demands that all their energies be directed towards a narrowly-defined product goal, subordinating equally important objectives and desires. It's frustrating. Work is depleting, yet somehow adds "life to the hours" both at home and at work. Work requires continual negotiation between both outward and inward projections: fulfilling your own needs in the challenge to learn more, do more, be "better" than last time, sometimes clashes with specific organizational needs and interests; personal time sometimes clashes with the need for overtime to complete a project or shipment date. A deep sense of safety comes in knowing that you are trusted, in conjunction with a darker sense of doubt in knowing that you are solely accountable within that trust.

Self in relation to others involves demands, interruptions, arguments. There is a sense that "I can be myself" in the midst of others, having no need to justify actions or to remain on guard lest someone misinterpret our actions. Interacting with others--in play, in dialogue, even in conflict--serves a generative function in the creation of new ideas and suggestions, new perceptions of others, and new perceptions of self. Within this environment, it is with great difficulty that people talk only of "I." Rather, it is "our" work, "our company," "our" project. This collective orientation frequently runs up against the personal valuing and significance of choice and autonomy at work.

The structures, processes, management, and directives of work--both explicit and implicit--make up a web connecting people, job tasks, goals, and meaning. Respect is a key foundation--respect for one's views and variations, for how you express yourself through your work, and for how you relate with others. This respect leads to the creation of work processes which encourage dialogue and innovation. To exclude someone from full participation within the workplace is an expression of disrespect or of "not recognizing humanity": not listening, not involving, not engaging, not making eye contact, making decisions which affect a work group without their input and insights, responding to one's ideas with ridicule, sarcasm, or silence. Inclusion demands participation and voice, which constitute "being a person" at work. Only through such participation and interaction will product quality be assured and improved, a sense of purposeful work be created, and interest and energy maintained.

As participants describe, respect is closely related to trust, because "when you respect another, you see your common humanity"--you see yourself within them. This implies high levels of trust from the first moment of relationship, given freely rather than following a testing period, trust which is maintained until actions occur which prove misplacement. "Empowerment" is a part of the human condition, rather than something that is granted or bestowed. Such trust is incompatible with tight controls, and implies such conditions as the personal use of company equipment, elastic timeframes for work, even the willingness to have others laugh with you at your own mistakes and trust they have no hurtful intent. As one leader described, trust is the belief "that people want to perform at their peak," then providing what they need and getting out of the way so they can do so.

With trust comes responsibility: the group is responsible for the project, the person for their work, the company for the person. Connected to responsibility is a strong sense of both personal and collective accountability. When you hold the responsibility, you are accountable for the decisions you make, the work performed, the hours claimed, the copies made. Accountability recognizes, however, that outcomes are not always a matter of individual

performance but the result of factors outside our control. The need for close interaction with others becomes necessary then, in order to support conditions which make accountability, responsibility, and understanding and empathy, realistic conditions of work.

Joking with co-workers, talking with the boss, examining a part, or taking time off to run the car into the garage become significant activities when framed against previous work experiences and our prior sense of what work is. Guilt lingers at times, "old tapes" claiming we should be more productive, or suggesting that people are watching, whispering, when we arrive for work 15 minutes late or leave a few moments early. Hesitantly, we sit for the first time among a work group, listening to heated debate and struggling to express our own ideas when that has never been invited until now. Escaping past bonds demands learning: learning to participate, learning to trust your instincts and judgment, learning to fight it out within the project room and still remain friends afterwards. The past loosens its hold as we come to know that we are valued and important here, that people will listen to our ideas. The construction of new meaning can be filled with frustration, though, and we sometimes insist on imposing the structures we are most used to as a way of confronting and overcoming the uncertainties before us.

A wide range of individual differences seem to influence the experience and meaning of work. Some people described a childhood upbringing they believed impacted their comfort or discomfort with their present workplace. Instincts for taking action may influence our sense of whether a system is too rigid or not rigid enough, provides too much structure or is chaotic, is safe or threatening. Other participants suggested age as a critical feature: younger workers believed their young age made them more flexible, adaptable, able to interact more authentically with others; older workers believed these same characteristics were attributed to their greater maturity and experience within the workplace. Individual differences, though frustrating at times, also serve to create a culture and work climate that are filled with the noise of life, the full range of sounds that accompany celebration and anger, joy and conflict, work and play. Some suggested it is the absence of such noise that reflects the more oppressive, restrictive work environment.

Within our society, the meaning of work will perhaps always be somehow connected with our ability to create and maintain a lifestyle. Yet within this environment there lie more fundamental meanings as well. According to these participants, work constitutes how we care for others and how we contribute to their lives. "It's a reason to create." Work means personal growth through the daily struggles and challenges, through expressive activity, and an ever-broadening perception of our presence in the world. It means the "thrill" and pride in "seeing something come from nothing," or in "pushing myself to do what I did not believe I could do." The experience of trust, responsibility, being connected with others, and recognition help to create meanings of value and of the awareness of one another's essential humanity. In the past, when these have been absent, participants present a reliance on financial outcomes to define meaning within work. While the material rewards as a meaning for work remain for all people, they increasingly dim as we engage more closely with others in purposeful work.

Discussion of Findings

Participatory or democratic social arrangements are more likely to result in experiences which arouse curiosity and strengthen initiative (Dewey, 1938), necessary conditions for continuous improvement. The natural workplace expresses its educative potential through interaction with others, structures and systems for communication which demand interpersonal competence and dialogue, movement from self-protective to ever-increasing autonomy, and the encouragement of postformal thought through processes which compel complex means of problem-solving. The "dark side" of work is balanced in part by ample opportunities for informal relationships which provide opportunities to re-energize and rejuvenate from the complexities present within the workplace. Participants indicated that interaction with others, and the nature of relationships which developed, affected not only the quality of the work but also one's sense of self. Cognitive development accompanies increases in social-cognitive experience as people are challenged to reflect on their beliefs or behaviors, to debate and dialogue, and to approach their work more critically (Sinnott, 1993). Increasingly complex ways of solving problems develop with social experience and encourage critical and postformal thought (1993).

The vital workplace depicts an organizational consciousness which values mindfulness--the active processing of information, differentiation, and always-present awareness of context. Langer (1989) proposes that human potential can be expanded through processes which demand an active rather than passive experience of work, cultivating individuals who continually create new challenges for themselves. Organizational goals are achieved by people who are originators rather than pawns, and expressive creativity encourages innovation rather than conformity and satisfaction with the status quo. Organizational leaders play a key role in removing barriers and developing mindfulness -- not by way of control and power but in terms of de-structuring work and the persistent and careful attention toward what will be of most use to the workers.

The idea of partnership, of interconnectedness, of holism, within the workplace leads us to appreciate that we are not separate from the world but a necessary and vital part of it. This interconnectedness, however, can and often does arouse conflict and contradiction. Rather than working to alleviate such uncomfortable conditions, leaders recognize that the tensions created can serve as originators of growth and development, opening avenues for new learning about self, about others, and about being a part of the work community. The natural workplace is as full of frustration as it is of joy, of angry emotion as it is compassion, of unpredictability as it is trust, of conflict as it is of happy and satisfied people. It seems to embrace all expressions of human nature, and values them each as sources of human animation and meaning. People, as one participant described, "live loudly" in their shared pursuit of business profits, relationships with others, and meaningful work.

Cultivating Vital Work: Implications for HRD

Participating workplace leaders involved in this study support the idea that *how* vital work evolves follows no set formula; there is no clear prescription of "steps" to take nor a clear point indicating when an organization has "become" a vital workplace. It is an on-going process of unfolding and learning; reframing organizations as sites for adult development begins not with a prescribed formula but with critical assumptions (see for example Aktouf, 1992; Bolman & Deal, 1995; Briskin, 1996; Dirkx, 1996; Welton, 1991) of human nature: that people are active constructors, not pawns, within the workplace; that we carry in us an innate drive to create something larger than ourselves; and that we are naturally motivated and empowered. When these are not expressed in our work it is less due to a deficit people hold but because of barriers embedded within the work context or our past experience. The findings of this study support the anecdotal evidence, prior research, and theory of the relationship between work and learning in suggesting central principles for HRD and the cultivation of the natural or vital workplace. These principles guide the concrete ways in which work is structured and conducted. While these principles are not necessarily exhaustive, they do present an experience of work which focuses on a way of being and becoming, on presence rather than appearance.

Solidarity. It is imperative that people within the workplace be seen as active and willing participants rather than as instruments of production. We must abandon management based on authority and in its place create opportunities which nurture people's natural desire to belong, to contribute, and to engage in meaningful work. Managers are not "artisans of liberation;" rather, a culture of convergence and sharing must be inserted into actual practice where people act on their intentions through reasons, feelings, and choices rather than by "causes." Only then will we recognize a unity and quality of worklife based on community of interests, objectives, and standards.

Engagement. Participatory and self-directing work processes provide the necessary opportunities for development through autonomy, relationship, and engagement with others. This participation, however, must be unrestrained by channels of command and mechanisms of control. Rather than simply a symbolic participation, people must participate in a real way with the sharing of profits, power, property, and decisions. The *perception alone* of autonomy, of being valued, and of participation will not sustain the more humanized workplace. It must, as Aktouf (1992) describes, be a lived rather than appropriated experience, one which holds the human actor in high regard in an authentic way. We also know we cannot engage people simply by asking them to participate; based on prior experience, many people will have to learn what it means to participate. The quality of engagement within the workplace is enhanced when leaders foster dialogue, authentic relations, and reflection by modeling these behaviors, challenging people, asking questions, and offering opinion over directive. Dialogue and reflection are sustained when people can see positive outcomes from these exchanges--when they see their voices are heard, their questions answered, their ideas considered, when information is freely shared, and when understanding is viewed as an important part of work. People's sense of business literacy will be enhanced through the free sharing of information and business problems concerning all aspects of the business--hiring, orienting new workers, sharing in the evaluations of work completed, regular information concerning the company's financial performance. Engagement also demands recognition of people's contributions in order to sustain their efforts and energies. Just as critical are opportunities to come together in informal ways which help cultivate a sense of solidarity and engagement with others: common eating or other socializing areas, company-wide events held, and organization-wide communication must be emphasized. These serve to enhance a real and meaningful sense of unity and connectedness.

Mindfulness. It is critical that an organization become willing and able to reflect on itself, to critique and question its own work relations, and to cultivate a more mindful or conscious orientation to the full environment in which it operates. Growth and development are fluid constructs, and there is never a point where either an individual or an organization has "made it" to a definitive evolutionary end. This more conscious and critical

perspective provides the means for increasing both personal and collective capacity, to expand identity and embrace a larger view of ourselves in the world.

Connectedness. A greater sense of holism, of connectedness and interconnectedness, must be recognized as it pertains to the worker and the product, the person and the environment -- we must view work in its full complexity and multidimensional character. This includes, for example, the relation between language, meaning, and work, and the relationship between communication, information-sharing, and a person's ability to contribute in a meaningful way. Conflict and contradiction are inherent components of connectedness. Rather than rushing in to "fix" problems, to ease tempers, or to speed production, organizational leaders are instead compelled to prod and push, to challenge people towards resolution. In this way, "problems" become forces for learning and innovation. For this to happen, however, leaders must reframe their sense of "resistance," and be willing to sit with the tensions created rather than jumping in to resolve problems themselves. This holding of the tensions encourages people to break out of their comfort zones, to think more critically, and to transcend rather than concede.

Meaningful Purpose. Finally, the purpose of work based strictly on economic assumptions must be challenged. Where more traditional workplaces and many workplace reforms focus on profit and consumption as primary goals, the vital workplace understands these as natural byproducts of a more humanized environment and as a means to contribute to a greater cause. Work is not simply about money, but about satisfying our need for expression, innovation, community, and purpose. When we acknowledge the full function of work in our lives, we cannot help but begin to reshape our organizations. Begin by asking, If profits are important for us to survive as a company, why is that survival important? To what end are we, as a company, truly working? And then, How can we best reflect this focus in the ways in which we conduct work?

Conclusion

Reforms that are targeted to change the behavior of others are not reforms at all (Aktouf, 1992; Block, 1997). Such reforms oversimplify human nature and depict the worker as an object rather than as subjects in their own right. By continuing to objectify the human at work, we relegate development to that which happens only when authorized by someone else, embedded within traditional structures of power and control. This ideology fosters a narrow and restrictive growth -- a miseducative experience -- in both the individual and the organization (Dewey, 1938; Welton, 1991) because it fails to acknowledge the complex relationship between individual experience and the full organizational context.

In contrast, this study suggests the natural workplace holds a greater educative potential. This study suggests that by de-structuring work and through the manifest valuing of the whole person within the organization, the natural workplace removes the barriers which serve to restrict and distort growth. Real and fundamental change within the workplace evolves through dynamic and contradictory means, where development is not a function of training but a way of thinking about and conducting work as a whole. This study reveals characteristics of educative work environments which return the person at work to that of a subject who acts upon his or her world. Such a workplace is not a utopia; it demands of people greater flexibility, the development of new skills, and a high tolerance for conflict and ambiguity. Fortunately, these environments provide the necessary context and opportunities for developing these qualities.

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Reorienting the Theoretical Foundations of Human Resource Development: Building a Sustainable Profession and Society

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The relationship between theory and practice and societal outcomes of human resource development (HRD) had not been discussed or critiqued. The underlying theories of HRD have changed in the past three decades yet such changes have not been addressed in HRD research literature. The theoretical disciplines of economics, general systems, sociology, psychology, and ethics are examined in terms of their currency to HRD and the extent that they influence societal outcomes.

Keywords: HRD Profession, Sustainability, Social Outcomes

There is a deficiency of related literature on the relationship between theory and practice and societal outcomes of human resource development (HRD). Not since the early 1990s have the theoretical foundations of human resource development been discussed or critiqued with any constancy or depth in the research literature and no publications were located that discussed the relationship between theory and practice and outcomes of HRD. Yet, the theoretical foundations are "the intellectual underpinnings of the profession (Chalofsky, 1992, p.181), and "research efforts must continually be guided by underlying theory" (Jacobs, 1990, p.70). Kaufman (1990) proposed that outcomes must be focused not solely on short-term economic outcomes, but on adding value to society.

Problem statement and theoretical framework

The relationship between HRD theory, practice, and outcomes remains controversial and ambiguous. While the relationship of theory and practice has generated moderate discussion (Swanson & Holton, 1997), inadequate attention in related literature has been given to the relationship between theory and practice and outcomes of HRD, especially societal outcomes, i.e., beyond individual, process, and organizational outcomes.

It is axiomatic that the outcomes or results of the efforts of human resource development are ideologically intended to add value to individuals, processes, and organizations. But to what attained purpose? The results of HRD should be expected not only of individuals and organizations, but also of society. Human resource development as a profession should address both the economic bottom line that addresses short-term outputs and profits and the societal bottom line that focuses on societal value added (Kaufman, Watkins, Triner, & Smith, 1998). In addition, HRD theory and practice that is counter to societal value-added and ineffective in promoting the sustainability of society and HRD as a profession should be challenged. This conceptual analysis examines how HRD's theoretical foundations have changed and how such changes may affect the sustainability of HRD as a profession and outcomes at the societal level.

Methodology

The methodology used was a conceptual analysis based on a review of related HRD and performance improvement (PI) literature. I reviewed empirical and conceptual studies published between the early 1970's and the present. In addition, I reviewed practitioner-based literature such as texts and magazines. The review included human resource development related topics such as training and performance improvement and theoretical framework, theoretical disciplines, and other theory-related topics.

Few references were found on the theoretical foundations of HRD and no references were located on how changes in theoretical disciplines have influenced HRD. Within the HRD and PI related literature only Kaufman (1997), Kaufman, Watkins, Triner, and Smith (1998), and Hatcher (1997a; 1997b) focused on the relationship between HRD/PI and social responsibility or societal impact.

Results

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Several disciplines have been identified as contributing to the knowledge base of HRD, namely education, systems theory, economics, learning, psychology, sociology, organizational behavior, anthropology, performance improvement, and management science (Chalofsky & Lincoln, 1983; Jacobs, 1990; Weinberger, 1998).

Passmore (1996), reflecting on the earlier work of Swanson (1994), said there were three disciplinary bases suggested as the foundation of HRD: economics, general systems theory, and psychology. Ruona and Swanson (1998) recently added ethics as a mediator of HRD theoretical foundations. Jacobs (1990) concluded that although various bodies of knowledge had influenced HRD, HRD should focus on the *social* and *economic* benefits of HRD and the contributing areas should be reviewed and analyzed.

Although there seems to be general agreement that HRD is an interdisciplinary body of knowledge, there is no agreement as to what part of this body of knowledge should be considered as essential for HRD professionals (Jacobs, 1990). "Existing knowledge derived from the various contributing areas should be reviewed and analyzed to reveal gaps in knowledge and direct HRD research efforts in a more systematic manner, using theories unique to HRD as the organizing principles"(Jacobs, 1990, p.70).

The disciplines of economics, general systems, sociology, psychology, and ethics are reviewed herein. These first four disciplines are consistently identified as theoretical foundations in the HRD-related literature, and ethics is the most current addition. Each of the five disciplines is discussed in two ways. First, how the discipline has been generally interpreted; and second, a contemporary interpretation of how the discipline has evolved and changed. Additionally, each discipline is discussed in light of its influence as a theoretical foundation on the societal outcomes of HRD.

Economic Theories

Prior to and immediately after World War II economic theory was dominated by fiscal and monetary policy (Rothwell & Sredl, 1990). In the 1960s, human capital theory which regarded labor as a form of capital became a major force in economic theory. Until recently, human capital theory as a subset of capitalism served as the dominant neoclassical economic theory influencing HRD.

The current focus on the technological aspects of economics at the expense of human and social issues is exposing the downside of dominate neoclassical economic theory. The neoclassical economic paradigm is considered to be an explanation of the capitalist system and to a lesser degree the human capital school of economics and suggests that "starting from zero consumption, people will strive to consume goods and services without limit (Burk, 1994, p. 315). Orthodox economic models fall short when addressing systemic social and global environmental dilemmas. "Long-term results cannot be achieved by piling short-term results on short-term results (Drucker, 1994, p.80). Thus, there is an urgent need for more holistic, ethical value systems and sustainable economic theories and models, which influence the theory and practice of human resource development at the societal level.

Sustainability is a state where the demands placed upon society and the environment by organizations and the economy are met without reducing the capacity of the environment to produce for future generations. Traditional economics is based on the notion of economic *growth*, which is an increase in quantity that cannot be sustained indefinitely on a finite planet. Conversely, economic *development* focuses on quality of life without causing an increase in the quantity of resources consumed, and may be sustainable.

Although efforts exist to construct alternative economic paradigms, the impact of neoclassical economic theory has not changed substantially in the waning years of the twentieth century. One of the most well–known contemporary socio-economic theories is post-capitalism. In post-capitalist society knowledge is capital. The "factor of production is now neither capital nor land nor labor. It is knowledge" (Drucker, 1994, p.6). Thus, knowledge work that produces few issues around consumption or social or environmental degradation adds worth to organizations, the economy, and society.

Another contemporary paradigm is environmental economics, a "transdisciplinary" field of study that addresses the relationships between ecosystems and economic systems in the broadest sense. These relationships are central to many of humanity's current problems and to building a sustainable future but are not well covered by any existing scientific discipline. A modest example is industrial parks where resources such as energy and wastes are shared or recycled from one company to another.

More socially responsive models must replace economic theories that do not enhance a sustainable society or environment. Business, and HRD as a sub-set of business, is increasingly being viewed not only in terms of changing economics, but as a social institution with moral obligations to the ecosystem, the community, and society.

Due to an emphasis on humanity and personal and community development, contemporary economic theories such as post-capitalism and ecological economics provide HRD an opportunity to reconceptualize its role and function within organizations and as a field of study. Understanding new economic theories dedicated to building organizations dedicated to a "sense of purpose, not just more" (Stead & Stead, 1996, p.117) may result in a leadership role for HRD in interpretation and operationalization of new economic theories that enhance the HRD profession and society.

Systems Theories

Systems thinking as an HRD theoretical framework offers (a) understanding of social entities in which HRD functions, (b) enriching of the discipline of HRD, and (c) advancing the futures of organizations (Ruona & Swanson, 1998, p.21). However, recent concerns with the relationship between organizations and social and environmental degradation important to human resource development have illuminated the relevance of related and contemporary general systems theories of *autopoiesis* or self-regulating systems, *deep ecology* (Capra, 1996), and the *Gaia* hypothesis. Each contemporary systems theory is briefly discussed.

Autopoiesis, also known as self-regulating or self-producing systems, is concerned with the fact that all living systems are organized in a closed circular. Luhmann (1990) developed a concept of social autopoiesis as a process or network of communication. Since social systems are language-bound, i.e., symbolic, they are self-produced by non-physical boundaries of expectations, loyalty, confidentiality, and so on (Capra, 1996).

Deep ecology is a broad-based, holistic worldview; a way of seeing the world as an integrated whole rather than a detached collection of parts. "Deep ecological awareness recognizes the fundamental interdependence of all phenomena and the fact that, as individuals and societies, we are all embedded in (and ultimately dependent on) the cyclical processes of nature" (Capra, 1996, p.6).

Perhaps the most comprehensive and fascinating example of systems theory is Gaia, the notion that the planet Earth is a living system. Gaia is an ancient and organic, Mother-Earth metaphor, taken from the process of life; mechanistic thinking depends on metaphors drawn from man-made machines.

Systems theories are evolving from a mechanistic general systems theory to the organismic philosophy of Gaia. Mechanistic science rejects the idea that Gaia is alive, yet many scientists believe that morphogenesis, instinctive behavior, learning, and memory are still among the unsolved problems of biology, and the nature of life itself remains an open question. Unlike scientific systems thinking, Gaia reflects the fact that humankind's actions cannot be separated from the Earth, and like the Great Mother of ancient mythology, that Earth has a reciprocal aspect that cannot be ignored.

It is hard to ascertain the true extent of the influence of such a ubiquitous theoretical construct as general systems theory, and it is most difficult within an interdisciplinary field of study such as HRD. Since HRD efforts are carried out within organizations, the field is most influenced by theories that help us comprehend and understand human nature, organizations, and work. General systems theories also help us understand process and the interconnectedness of people, organizations, and society.

The theoretical foundations of HRD can positively influence society through our organizations only if more influential organizational members become moral agents armed with ways and means to ensure long term economic and social sustainability. Human resource development professionals contribute strategies such as systems thinking which can play a primary and pivotal role in enhancing the social performance of today's organizations (Hatcher, 1997b).

Psychological Theories

One of the most influential psychological theories applicable to HRD is behaviorism. Stimulus-response theories instruct the professional to identify and analyze stimuli within a system that may affect performance, responses that are emitted, and the consequences of those in order to uncover root causes of performance problems. Gestalt psychology also contributed to learning theory by adding the notions that patterns, relationships, and understanding of the whole are important in pattern recognition and perception.

There were also contributions of early cognitive psychologists experimenting with ways to enhance learning. Bloom's taxonomy and Gagne's conditions of learning are examples of cognitive theory linking learning to instruction. Cognitive learning theories like all learning and behavior theories have developed and evolved over the quarter century since the birth of HRD and are achieving notoriety in current HRD and PI literature.

More contemporary cognitive theories related to learning and HRD include transfer of knowledge from training to the job, motivation theories, and metacognition. Currently, the combination of social learning and cognitive psychology or social psychology has resulted in several theories such as situated learning and cognitive apprenticeships that are having an impact on learning and cognition applicable to HRD.

Unique psychological theories such as ecopsychology, the combination of psychology and ecology that focuses on the emotional bond between human beings and the natural environment out of which we evolve are beginning to emerge and influence social science disciplines. As economic theories such as environmental economics that address ecological concerns evolve, so to will psychological theories like ecopsychology.

Psychology being the study of human cognitive and affective development and processes places it squarely in the forefront of the theoretical foundations of HRD. Psychology has contributed much of what we know about how people learn and function within organizational environments. However, this central focus on the individual has drawn criticism. Psychology as an HRD discipline is myopic in failing to address individuals within contexts such as groups, organizations, and societies. Its relevance to HRD societal outcomes has been markedly limited. Changes in psychological theories will challenge HRD researchers to use alternative psychological assumptions as theoretical frameworks, and to reconceptualize the impact that psychology has on HRD outcomes at the societal level.

Sociological Theories

Like psychology, much of HRD practice and research is based upon various and divergent sociological theories. "Much of what is known about organizational culture and socialization...stems from sociological theory" (Rothwell & Sredl, 1992, p.60). Several existing and emerging sociological theories that may influence HRD are discussed.

The sociological theory of functionalism may be defined as the analysis of social and cultural phenomena in terms of the functions they perform in a social and cultural system. A concept of functionalism that influences HRD is the functional-dysfunctional continuum. Generally, when a subsystem supports the system it is functional. When a subsystem hinders the overall operation of a system, it is considered dysfunctional. This is important to HRD because it helps explain efficiency and effectiveness of subsystems to the larger system.

The major alternative to functionalism is conflict theory. Where functionalists see interdependence and unity in society, conflict theorists see an arena in which groups fight for power, and the control of conflict simply means that one group suppresses its rivals. Here power is the core of social relationships. In most modern organizations and especially bureaucracies and those that are hierarchical, conflict theory is most useful in explaining relationships.

Unlike functionalism and conflict theories that focus on systems, organizations, and society, symbolic interactionism focuses on the interaction of an individual's internal thoughts and emotions and external social behavior. Here, individuals construct their own conduct through symbols that guide their decision making and forming of opinions. Unlike functionalists, who see people as passive agents, symbolic interationists view individuals as self-interacting and not dependent on social, cultural, or psychological variables to determine action. Symbolic interactionism is a framework for qualitative methodologies used in much of HRD research.

Compared to other sociological theories, phenomenology is more recent and somewhat more difficult to define and describe. In phenomenology, the individual avoids all prior assumptions, biases, and dogmas and thus examines phenomena immediately as they occur. It challenges culturally learned ideas and implies that reality is socially constructed. Types of phenomenological sociology include ethnomethodology, social construction of reality theory, and feminist standpoint theory.

Additional alternative and contemporary sociological theories that may be influencing HRD include postmodernism, environmental sociology and sociobiology, and feminism. Each theory is briefly discussed.

Postmodernism is an analysis of modern society that focuses on the power of mass media in shaping social relationships and those popular culture influences our consumption. An important implication of postmodernism is that the value and utility of images and symbols is no longer regarded. As a result, "qualities like artistic merit, integrity, seriousness, authenticity, realism, intellectual depth and strong narratives tend to be undermined" (Strinati, 1995, p.225).

Among the most recent of the theories discussed, environmental sociology and sociobiology are interdisciplinary theories that combine sociological theory with either biology or environmentalism and examine the relationship between culture and nature. Environmental sociology may indirectly impact HRD by increasing our awareness of the dominion that corporations have over the environment. Sociobiology, or sociology of the body, is concerned with humans as a biological species within a culture; that how we perceive our bodies, how others perceive them, and how they perform is a function of society. Feminism, the study of how women are represented in

culture, is playing a dominant role in the sociology of the body. Feminism also addresses gender power issues and cultural and media representation of women. Especially in the West in the past two decades, feminism has played an important role in corporate culture.

It is difficult to ascertain the exact influence that any particular sociological theory has had on HRD. One conclusion is "it depends" on the organization, the corporate culture, and the societal culture. Since HRD is concerned with how people interact within organizational environments, it is axiomatic that sociological theories are fundamental to the theoretical foundations of HRD. Which theories are most influential is a matter of context. As HRD becomes more global and multiple cultures are considered, sociological theories such as symbolic interactionism, feminism, and eco-sociology will become more valid and will nurture new theories, research designs, and practices.

Ethics

Ethics is the newest addition to the theoretical foundations of HRD. Ruona & Swanson (1998) said that ethics and integrity of those ethics, are vital issues for the field of HRD (p.25). Rothwell and Sredl (1992, p.190) added that HRD professionals should be more keenly aware of ethical and value issues than most people. Dean (1997) concluded that we should consider ethics in our research and be included in our research agenda because "virtually no investigation can remove itself from the concern of ethics" (p.4).

Unlike the other four HRD disciplines, ethics as a body of knowledge has remained relatively stable over time. What has changed is the application of various theories, interpretation, and significance in business and industry especially within the last half of the twentieth century. Thus, the primary focus of this discussion is on use of varied ethics theories and the application or practice of ethics within an HRD or business context.

There are many and varied theories of ethics applicable in a business context. Take for example, *utilitarianism*, a philosophy based on the premise that no action is inherently good or bad, but only with regard to its consequences; and *deontology*, the study of moral obligations to universal principles.

Utilitarian thought suggests that people should promote the greatest amount of happiness for the greatest number and identifies moral actions as right in proportion as they promote happiness, and wrong as they produce pain and deprivation of pleasure. Deontology denounces that consequences dictate morality. As a deontologist, Kant maintained that people act according to moral rules or "categorical imperatives" which they would suggest everyone follow.

Successful organizations tend to subscribe to the Kantian ethical theory (Tuleja, 1985). Theories of ethics relevant to HRD depend upon appliation and substantiation in a business context.

Ethics are principles of right or wrong that motivate personal behavior and support or refute the correctness of such behavior. Ethics are interpreted through the interaction between the multiple contexts of individual ethics (based on morality, ideology, values, and experience), and the ethical climates of the organization, business, and society (Carroll, 1989). Interpretation of ethics is problematic within a global business context containing multiple societies.

The practice of ethics help us resolve ethical conflicts and manage ethical problems that are important in international contexts. HRD can help create and maintain an ethical climate within an organization which allows for individual ethical diversity yet promotes organizational and societal goal attainment. Structural issues such as establishing a code of ethics, reducing inducements for misdeeds, and raising the risk of exposure are operationalized in HRD programs.

Ethics is fundamental to the creation of organizational outcomes that result in social and moral responsibilities beyond that of creation of wealth. Thus, ethics as one of the theoretical foundations of HRD provides the vehicle for these outcomes to occur. However, the economic environment in which organizations flourish or decline, e.g., free enterprise, profit-oriented, and consumer-driven is exerting tremendous pressure to increase productivity and profit. Simultaneously, organizational impact on the environment, the community, and society is continually challenged and scrutinized. This dilemma is causing stress between organizations and society. Without a reliable vehicle with which to address the issues of social responsibility and responsiveness, organizations may abdicate to financial pressures, thus losing forever the opportunity to create a sustainable future.

In addition to organizational ethical issues, the ethics of HRD as a profession plays an important role in developing ethical behaviors in organizations and groups within a community. As HRD matures, codes of ethics and mores of acceptable behaviors will emerge and influence the growth of acceptable and unacceptable organizational ethics that impact individuals, organizations, and society.

Discussion

Organizations significantly and continually influence humanity and acquire dominance over social and eco-systems. Human resource development as an organizational function plays a principle role in enhancing the long-term sustainability of organizations and has the potential to help cultivate organizations that positively influence individuals, communities, society, and the environment. The theoretical foundations of a discipline dedicated to enhancing human development within organizations dictates its validity and, in many ways, its success as a field of study.

As an integral part of today's organizations, human resource development has an economic responsibility to the organizations who employ its professionals and methods and the HRD profession has a moral responsibility to individuals trained and educated and otherwise influenced. But, as discussed herein, HRD also has a responsibility to recreate itself through self-assessment to create a field of study that is responsible beyond out-dated social and psychological theories and traditional economics.

Shortsighted economic theory and obsolete theories of systems and morality are faithful to short-term returns and disjoined approaches to sustained change. Such theories hamper socially responsive organizational and positive societal changes and limit the sustainability of professions.

Shifts in theoretical paradigms are catalysts for progress toward sustainable development of the environment and humanity. It is incumbent upon applied disciplines, especially a discipline such as HRD in search of its own identity (Watkins, 1990), to systematically review its theoretical underpinnings to ensure their validity and worth. Such an undertaking identifies flawed theories and highlights more valuable and cogent theories.

Human resource development professionals and academics who respond to the challenge of updating and evolving the theoretical foundations of HRD will help to advance its theoretical rigor while correcting for the invalid influences of archaic disciplines.

Contribution to new knowledge in HRD

Although human resource development (HRD) as a field of study has been analyzed from its theoretical perspectives to a degree, there has been no distinct attempt to analyze and modernize the various disciplines that make up its theoretical foundations. HRD as a profession and a field of study must know how its theoretical foundations have changed and to what extent such changes may have affected it in order for HRD to remain a viable and rigorous field of study. This review of theoretical foundations of HRD serves as a catalyst, a "jumping-off" point for further investigation into the theoretical foundations of HRD with a focus on outcomes at the societal level.

The implications of this conceptual analysis are twofold. First, a more comprehensive study of alternative disciplines might shed light on more applicable and valid disciplines than HRD currently addresses. Second, since shifting theoretical paradigms influence HRD research and practice a review of how or to what extent research and practice have changed as a result should be completed.

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Towards a Philosophical Framework for Thought and Practice

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Philosophy is often thought of as an abstract discipline with little practical utility. The goal of this paper is to revive philosophy as an important activity with much relevance in HRD. A framework which emphasizes a systems perspective of philosophy is proposed and each component is briefly described. Then, the practical contributions of philosophy are demonstrated by examining three current issues facing HRD.

Keywords: Philosophy, Thought and practice, Systems Perspective

Although often thought of as a discipline of abstract thought with little practical utility, philosophy can play a very useful and purposeful role in HRD. Before progressing further, think about the following scenarios:

> A CEO at ACME company calls in the company HRD professional and announces that ACME has got to be more proactive on issues of diversity. He requests that the HRD professional immediately begin to implement interventions that will address this problem. The HRD person accepts the assignment and begins his work. In the next six months, he creates policies and procedures on diversity and sensitivity, works with HR to set quotas for recruitment and hiring and implement new HR policies, and mandates sensitivity training for all management.
>
> At XYZ, Inc. across town, a CEO calls in the company HRD professional with much the same request. This person, however, requests sessions with the key leaders of the business to come to a better understanding of what diversity means to this company and clarify their business and moral motivations for pursuing interventions related to diversity. Six months later, the company has begun an set of coordinated interventions related to building and maximizing community at the company. The focus is on valuing diverse contributions and eliminating barriers that hinder individuals in achieving their goals. There were very few new policies set, no quotas mandated, and the training and OD efforts emphases integration and optimization of diversity.

These HRD professionals both faced the same presenting problem. They were charged with confronting diversity practices at the companies in which they worked. However, the resulting interventions differed greatly. Why is this? Some analysts might conclude that the differences had to do with competence of the HRD professional, differing company cultures, or the desires of top leadership. However, if we look beyond these things we might have discovered that the real differences were much deeper. Each of these two HRD professionals brought fundamentally different philosophies to their work. If we had been able to interview them, we might have discovered that the HRD person at ACME and the person at the XYZ, Inc. differed greatly in some of their basic assumptions about diversity. Table 1 outlines a few possible ones we might have found.

The beliefs that each HRD professional brought to their work fundamentally impacted the shape and qualities of the interventions that followed. These beliefs affected how they were able to think about and evaluate issues related to diversity, how they assessed needs in the organization, and their actions in the organization. Moreover, if an HRD researcher had been investigating these interventions, the way in which these they were studied would have been influenced and the findings would have also been quite different between the companies.

Now, this example may feel a bit exaggerated to you, however this is what goes on everyday. How one views the world impacts all else that flows from that view. This is certainly not "new" news. Senge (1990) alerted us to the "iceberg nature" of deep structural issues and how these change the shape of what is seen and done. In this sense too, assumptions and beliefs about the world and knowledge change the nature of what we see, know, and do in HRD. Yet, many past conversations in HRD have been largely about what would be the metaphorical "top" of the iceberg. Until we look beneath the action of practice and research, we will be unable to tend to fundamental issues and challenges facing our field.

Table 1

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Example Beliefs of Two HRD Professionals.

Beliefs/Assumptions	HRD Professional at ACME	HRD Professional at XYZ, Inc.
What is Diversity?	• A problem to be solved and managed. • Not an enhancer of business performance.	• An opportunity to reflect on community and create in new ways. • An issue of human differences inherent in business, that enhances a business's competitive position.
Differences	• Should be minimized so people can work together better and easier.	• Should be maximized for optimal performance.
Conformity	• Conformity to a "majority" view is good .	• There are multiple worldviews and ways of doing things and these should be fostered.

Purpose of this Paper

The purpose of this paper is to provide a focus for new conversations—to re-stimulate discussion of philosophy underlying HRD theory and practice. A framework which emphasizes a systems perspective of philosophy is proposed and each component is briefly described. Next, the importance of philosophy is discussed at two levels. First, generically in terms of what philosophy, as an activity, offers. Then, more specifically, as a framework to elucidate how current issues facing and being dealt with in HRD, both practical and theoretical, fit into a broader philosophical context.

What is Philosophy?

The word "philosophy" is a word of Greek derivation meaning "the love of wisdom" (Cavalier, 1996, p. 2). A traditional view of philosophy is that it is the field of ideas and thinking about life and everything in it. This seems a bit lofty for many who must cope with practical problems on a daily basis. However, philosophy is generally concerned with three basic issues: being (ontology), knowing (epistemology) and acting (axiology). Through these foci philosophers are interested in answering the following three questions: (1) What is real? (a question of ontology), (2) What is true? (a question of epistemology), and (3) What is good? (a question of axiology).

If one thinks about these foci as separate areas of inquiry, then philosophy does not seem to serve much purpose. However, in actuality, these three areas all work together to make philosophy what it is. In this sense, from a systems perspective, the whole is more than the sum of its parts. A revival of philosophy as a highly practical activity hinges on our capacity to view it as a set of interacting components which, when viewed as a whole, have properties that do not exist within any of the smaller units (Heylighten & Joslyn, 1992). Systems theory, which has been advocated as a foundational discipline by many in HRD (Ruona, 1998; Swanson, 1998; Willis, 1997; Gradous, 1989), reminds us to view the multiple tiers and relationships that exist between these components of philosophy.

A System of Interacting Components of Thought and Practice

To get a sense of the potential utility of philosophy one needs to consider philosophy as a system of thought and action (Bohm, 1994). That is, as an activity or process of inquiry that is concerned with disciplined reflection, ways of thinking about certain questions, interpreting texts, trying out ideas and thinking of possible arguments for and against them, and wondering about how concepts really work.

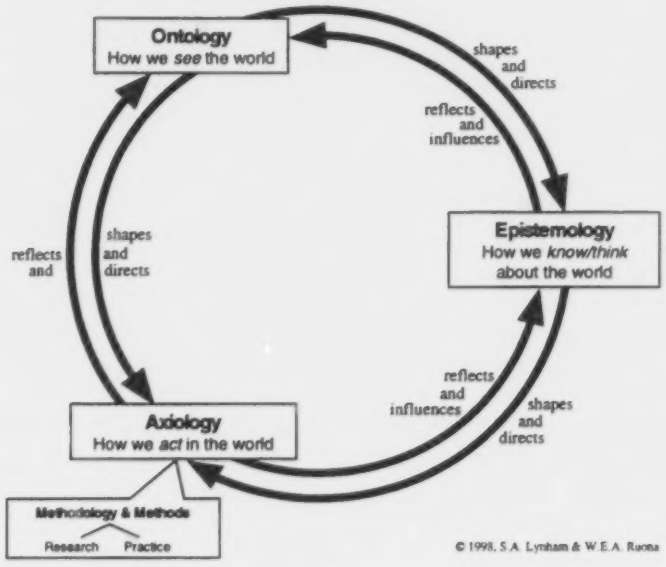
We therefore see the critical components of a philosophical framework for HRD as consisting of three key components.

1. Ontology: the component that makes a view of the nature of the world and nature of phenomena of interest to HRD explicit (how we *see* the world);
2. Epistemology: the component that makes the nature of knowledge in HRD, and the necessary and sufficient requirements to hold and claim knowledge in our field explicit (how we *know/think* about the world);

3. Axiology: the component that makes explicit how we ought to act, individually as well as communally in our field. It outlines espoused aims, ideals and proper methodologies and methods for HRD inquiry and practice (how we should *act* in research and practice).

These three components interact in a dynamic and systemic way, together forming a guiding framework for a congruent and coherent system of thought and practice in HRD. Figure 1 shows the interactive and dynamic relationship among the key components integral to a sound philosophical framework for research and practice in HRD. It elucidates the connections—demonstrating that how we *see* the world determines how we *think* about the world, how we *think* about the world determines how we *act* in the world, and how we *act* in the world, in turn, reflects how we *think* about and see the world. And, that each of these components reflects and influences the other.

Figure 1. A Philosophical Framework for Thought and Practice.



Philosophies can be individually held. More commonly, however, philosophies are shared. History is characterized by phases where different prominent philosophies influenced current conditions, actions, and events. In education, for example, the philosophical schools of thought forwarded by Dewey and Snedden are consistently contrasted and analyzed for their varied impacts on schools in America. In business, Taylor's scientific management philosophy is being replaced by more organic views of how organizations function and disciplines like HRD are helping organizations cope with the far-reaching implications of this change. It is our presupposition that HRD must begin to identify its own philosophy as a community of professionals engaged in "improving individual and organizational performance through learning" (AHRD, 1998). The next section briefly overviews each component of philosophy to offer a common basis of understanding and discusses the utility of each component in HRD.

Core Components of Philosophy

What is Ontology?

Definition Ontology is concerned with fundamental assumptions about the nature of phenomena (Gioia & Pitre, 1990). It focuses on basic questions and assumptions about the nature of reality—questions like: What is real? What is "there" and what do we mean by "there"? What is the world made of? Is reality ordered in any way? Is reality "out there" or "inside us", or a combination of both? What are humans? Kuhn (1970) also introduced another way of thinking about ontology in his notion of a paradigm. A paradigm is a worldview, or a way of thinking that reflects fundamental beliefs and assumptions about the nature of phenomena. An ontology, ulimately, is how one sees and views the world and reality.

Utility Mapping the ontology of a field involves making explicit the common understandings, beliefs and assumptions of how those in the field see the world, of how they perceive the essences of reality and phenomena that constitute the field's concern and focus. It is about identifying and articulating the core assumptions about reality that drive the thought and practice of a field.

What is Epistemology?

Definition Gioia & Pitre (1990) describe epistemology as "fundamental assumptions about the nature of knowledge about phenomena" (p. 585). Epistemology (also described as theory of knowledge) is the component of philosophy that raises questions about the nature of knowledge and reasonable belief. In so doing, it addresses the following kinds of questions: What is knowledge? How does knowledge differ from mere opinion or belief? How is knowledge acquired? When is a belief justified or reasonable?

Central to epistemology is the Socratic, tripartite equation of knowledge which states that *knowledge = true, justified belief* (Pojman, 1995). Epistemology is therefore concerned with not only the nature of knowledge, but also examines the necessary and sufficient conditions required for these components of knowledge (Root, 1997). Epistemology is about how we know and think about the world.

Utility Examining the epistemology of HRD involves articulating the common assumptions, thoughts and understanding of what makes for knowledge of and about phenomena in HRD. It also denotes the necessary and sufficient standards for knowledge in HRD. It therefore serves a purpose of both clarification of the nature of knowledge and standards for "good" knowledge in a field.

What is Axiology?

Definition Axiology (sometimes referrred to as ethics), a third component of philosophy, is concerned with action. It is normative, speaking to issues of ethics, what is good, and what ought to be done. In other words, it indicates how one should *act* in inquiry and practice, and the extent to which this action should be congruent with ontological and epistemological aims and ideals.

Utility Axiology urges congruence between the ontological and epistemological assumptions and the espoused actions of a field. Thus, axiology plays an important role in putting the standards and requirements of acceptable methodology and methods for research and practice in HRD in place. Making the axiology explicit helps to set and clarify the guiding tone and rigor for action in HRD. It helps to define desired standards for methodology and methods in both research and practice.

What is Methodology and Methods?

Definition The concept of axiology is broad and includes quite a few things. There seems to be some ambiguity in philosophy about what comprises axiology. However, two important elements of axiology would seem to be methodology and methods. Methodology is defined as the system that influences the way things are done—how we choose and use methods, and conceptualize, analyze, collect, and design. Methods are means and manners of procedure.

Due to the applied nature of HRD, methodologies and methods need to be considered in the context of both research and practice. Methodologies in research inform us of ways of studying phenomena (Gioia & Pitre, 1990) while methodologies in practice inform us of ways of carrying-out interventions in HRD. Methods in each domain expand the methodologies by offering tools, techniques, and procedures. See Figure 2 for some examples of how methodologies and methods are connected.

Utility Specifying methodology and methods for conducting research and practice enable us to "rigorize" research and practice in HRD. This rigor demands that we judge research and practice against desired standards that are inherent in axiology. Given the rising concern about increasing atheoretical practice (Swanson & Holton, 1997) and unuseful theory in HRD, a framework and criteria for judging the utility of research and theory and the soundness of practice would seem to be both welcome and useful.

Figure 2
Two Important Elements of Axiology.

	Methodology	Methods
Research	*Positivistic*	• Experimental • Quasi-experimental • Survey
	Interpretive	• Phenomenology • Case Study • Etc....
	Critical Science	• Critical Theory • Feminist Theory • Etc...
	Methodology	**Methods**
Practice	Training and Development	• ADDIE • Performance-Learning-Satisfaction Evaluation • Etc...
	Organizational Development	• Action Research • Intervention models/processes • Etc...

Why is Philosophy Important?

Philosophy helps develop capacities for thinking (Honderich, 1995). At the heart of it, philosophy is a systematic examination of the assumptions that underlie action. Theories-in-use are investigated and analyzed to surface the essences of thoughts and ideas that, ultimately, drive actions. Magee (1971) tells us that "one of the tasks of philosophy is mapping the logic of...discourse, laying it out, so to speak, so that a person can make his way about it successfully" (p. 45).

In fulfilling this role, it affords practice in criticism. Examples of this include building counter arguments to common wisdoms (Root, 1993) and developing examples for questionable generalizations. It also develops responsiveness to concrete cases and an appreciation of the thinking expressed in these. Finally, it enables interpretation and theorizing, for example, by relating positions of one area of inquiry to those in another.

Philosophy thus provides us with 1) practical ways of thinking about certain sorts of questions (questions of the nature of reality, truth and ethics) and 2) the use of logical argument, disciplined reflection, and theoretical reasoning in this questioning process. It helps us develop skills to critically think about things concerning the nature of the world, justification of beliefs, and the conduct of life. Philosophy engages us in the interpretation of texts and the criticisms of common wisdoms that are often taken for granted.

Implications for HRD

There is certainly utility in each of the components described above. In addition, philosophy offers a context in which to view current issues being dealt with in HRD. Three areas that philosophy can impact are discussed here: 1) practice, 2) research and theory building, and 3) the evolution of HRD.

Implications for Practice

Reflection about philosophy (ontology, epistemology, axiolgy) ensures that as practitioners we are leading, in Plato's words, an "examined life", acknowledging that beliefs about basic ends and principles lead to concrete conclusions and action. This process can be done unconsciously where it is subject to many hazards. Or, it can be done consciously where one (or an entire field) strives for clarification and alignment. This is not to say that this clarification process is ever finished—it is a continual process where "new light is always dawning on meaning of concepts at every level, with the consequence that the whole enterprise has to be forever examined" (Magee, 1971, p. 47). However, striving for the identification of key beliefs and assumptions about each of the three components and, then, being grounded in those articulated by the discipline of HRD will undoubtedly result in better and more

consistent practice. This is especially relevant in HRD, an applied field driven by its practice, where theory sometime lags behind the challenges being faced in organizations. Philosophy provides some structure on which to make decisions when research is not there to support a practice or policy. Magee (1971) identifies the importance of philosophy to complement science when he explains:

> Conclusions about what to do are a mixture of judgements about the "excellencies to be produced" combined with empirical or scientific knowledge about how to produce them. It is important to notice that we cannot derive the list of prescriptions, excellencies, that are a set of value judgements about what to do, from the descriptive, empirical, knowledge accounts of what the facts usually are. It is, in short, not possible to go directly from scientific understanding to policy and practice. Practice is always a combination of prescriptive convictions and descriptive understanding. (p. 46)

The logic of philosophy allows us to engage in thinking that is at once disciplined and imaginatively creative. We are able to apply philosophical methods to practical problems and ascertain what the issues are and how different assumptions affect the problem. In addition, we can use philosophy to analyze and interpret practice. In these ways the idealism of philosophy can be used to improve how we address practical problems. The act of philosophy cultivates the capacity and appetite for reflection, for exchange and debate of ideas, for life-long learning, and for dealing with problems for which there are no easy answers.

Implications for Research and Theory Building

HRD has recently turned its attention to an important phase of its own development. There is increasing effort being invested in the areas of theory-building and research. Critical work is being done to encourage and refine research methods and paradigms (Swanson & Holton, 1997; Marsick, 1990) and to call attention to the importance of building theory in HRD (Mott, 1998; Hansen, 1998; Torraco, 1997; Chalofsky, 1996). The motivation driving these efforts is to undergird HRD with a solid, systematically-acquired knowledge base.

Another important part of the evolutionary process is to acknowledge the philosophical framework in which these discussions are taking place. A worthy debate on paradigms for research and theory-building between Marsick and Passmore in 1990 hinted at connections of research with epistemological concerns and even with notions of worldview (ontology), but these connections are rarely made. Many discussions of research and theory-building are happening in a vacuum concerned with only science and methods, or the "how to" of generating new knowledge. For the most part, scholars have agreed that there are two primary ways of doing research (quantitatively and qualitatively) and have urged people in the field to get on with the business of researching.

While this is practical and necessary, there is certainly merit in also placing knowledge-generation in a philosophical framework—put in it's place, as it were, and strive to understand how it is connected with how we see, think about, and act in the world. Research and theory-building are only parts of an overall context that drives HRD. How we see the world and what we recognize as knowledge in HRD fundamentally affects the methodologies we employ to research and build theory. A too limited view of ontology and epistemology can limit the scope and utility of HRD. A too broad view can lead to the slippery slope of relativism where there are few standards. Philosophy ultimately requires us to consider what knowledge and theory really are. When placed within a context of assumptions about reality and nature our current views of these things may or may not change. Marsick (1990) states:

> ...if we are to describe accurately and explain the world we research, then, as we work we must test our assumptions about what we view as knowledge, whether our view is compatible with the nature of organizations and the phenomena we are researching, and how we believe we should go about researching these phenomena. (p. 33)

It is important to acknowledge how science and philosophy complement one another and proceed on a journey that demands work in both areas from HRD scholars. Philosophy is not more or less important than science, it is just different. While science tells us what the world contains, philosophy asks about different ways to classify these things. While science produces knowledge, philosophy asks what we can know and how. While science provides new knowledge of the observable or based on experimental tests, philosophy suggests "rules" for the stuff of reality and how it is organized. Philosophy looks behind science and analyzes concepts/notions and methods that are used. It pushes a discipline such as HRD to strive for even more than good research. In this way, philosophy

may suggest important standards of rigor for research and theory building that have yet to be considered.

Implications for the Evolution of HRD

Philosophy also plays an important role in the future of HRD. HRD continues to deal with perennial issues that threaten its stability and future effectiveness. Recently, Warren Topp (1998) introduced these authors to the concept of a "conversation having us"—that is, of a conversation which is going-on and becomes the prominent focus such that little else actually happens except the having of the conversation. Very few new thoughts are generated, positions are defended, tradition weighs heavy, and very little progress is made in understanding and creating new meaning. Some would say that HRD is currently engaged in a few of these kinds of conversations.

One such issue is the purpose of HRD which has been heavily discussed during the last five years. Philosophy can provide a framework for articulating the purpose of the field and moving past the conversation having us. Instead, we need to have the conversations—and the only way this will happen is if we really begin to explore the deep assumptions that drive our field. It is at this level that generative conversations take place and real change begins (Topp, 1998; Bohm, 1994). Surfacing and clarifying key assumptions about ontology, in particular, provides a set of criteria to guide future discussions of what is and isn't HRD. We can analyze different schools of thought emerging in HRD (i.e. performance and learning) to see where they come together and where they do not. Philosophy can be a rigorous backdrop for judging whether and to what extent the field can accommodate multiple definitions and purposes. This same set of criteria can also be used to balance the long- and short-term interests of HRD—helping us to do both for the optimization of the field. Philosophy can be an important mechanism to guide the nature of conversations that need to continually be held in HRD. This will ensure that HRD grows well.

Another issue that is increasingly being discussed is that of professionalization in HRD. The focus of a 1998 AHRD symposium, the issue is multi-faceted and controversial. One of the emerging dilemmas is what any kind of credentialing or certification would be based on. Reflection, theory-building (Mott, 1998; Hansen, 1998), research, and competencies have been suggested as possible bases, while others have suggested bases that are more philosophically grounded. Ellinger (1998) and Watkins (1990) have both advocated an integrated vision and values. Chalofsky (1996) suggested that the discipline's core must include philosophy and mission, theory and concepts, and roles and competencies. It is presently unclear where this conversation will lead and how it will impact the future of the field. However, it is clear that philosophy and the above-proposed framework for thought and practice in HRD will factor into it.

Conclusion

The purpose of this paper was to provide a focus for new conversations—to re-stimulate discussion of philosophy underlying HRD theory and practice. It offered a framework in which to think of philosophy more systemically and demonstrated the potential impact that philosophy can have in HRD. In closing, we are reminded that during the first century of science, many great scientists considered themselves to be revivers or rediscovers of knowledge. We now invite you to join their ranks and revive philosophy as an important context in which to couch paradigmatic and methodological progress in HRD.

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The Need for Theoretical Model Building in HRD

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The problem addressed in this paper is the lack of conceptual clarity and definition in the field of HRD. Through literature review and analysis, four significant related issues are presented, and five ways theoretical model building can facilitate conceptual clarity and definition in HRD are identified.

Keywords: HRD, Theory, Model

For a field growing, expanding, and trying to define itself (Jacobs, 1990; Marsick, 1990, 1990a; Watkins, 1990; and Chalofsky, 1992), Human Resource Development (HRD) has surprisingly few "HRD" theories and models specific to the field. Four significant issues related to this observation are: 1) the very diverse philosophical - methodological - practical stances taken towards what is appropriate for HRD research, 2) no clear, widely accepted definition of this evolving field, 3) the lack of "HRD specific" research, and 4) the lack of theoretical model building evident in the literature. The problem of this study is the lack of conceptual clarity and definition in HRD, and the research question is, "How can theoretical model building facilitate conceptual clarity and definition in HRD?"

The Philosophical and Methodological Issue

Marsick (1990, 1990a) and Passmore (1990) articulate some of the conflicts currently faced by researchers as they attempt to create research and build the field of HRD from various philosophical, methodological, and practical perspectives. Some of the academic and practical tensions existing between various rational, empirical, positivistic stances toward what is acceptable, needed, and meaningful research for the field of HRD versus various contextual, rigorous, post-positivistic stances towards what is acceptable, needed, and meaningful are indicated. The question is not do researchers and practitioners build and develop the field of HRD relying only on knowledge derived from various postivisticly oriented experiments, surveys, etc., or various post-positivisticly oriented case studies, phenomenological observations, etc., or both. Rather, as Marsick and Passmore agree, research and theory building are desperately needed, regardless of the philosophy and methodology employed. Dubin's (1978) position is that a theory/model developed from any philosophical perspective and employing any appropriate methodology is acceptable.

Moreover, Dubin (1978) asserts that it is not philosophical perspective or methodology employed, but "consesus" that determines a theory/model's acceptability. Consensus is the key, and he indicates that there are three different ways in which consensus can be reached: 1) the agreement of experts, 2) the logic utilized in the development of the theory/model, and/or 3) the proof provided by empirical testing of the theory/model.

The Lack of a Unifying Definition Issue

Chalofsky (1992) states, "One of the more debated issues in the field has been the need for a unifying definition that would not only provide a focus for the development of the profession but would also set limits on the boundaries of the field." He points out that there are many definitions of the field of HRD, and presents seven of them:

> *Nadler's* from 1990, "Organized learning experiences in a given period of time to bring about the possibility of performance change."
>
> *Chalofsky and Lincoln's* from 1983 which offers specific definitions of HRD from five perspectives: philosophical, operational, functional, field of practice, and field of study.
>
> *McLagan's* 1989 which was sponsored by the American Society for Training and Development, "HRD is the integrated use of training and development, career development, and organization development to improve individual and organizational effectiveness."

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> *Gilley and Eggland's* from 1989, "Organized learning activities arranged within an organization in order to improve performance and/or personal growth for the purpose of improving the job, the individual and/or the organization."

Smith presents two definitions from 1990, "The process of determining the optimum methods of developing and improving the human resources of an organization and the systematic improvement of the performance and productivity of employees through training, education, and development, and leadership, for the mutual attainment of organizational and personal goals."

> *Watkins'* from 1989, "The field of study and practice responsible for the fostering of a long-term, work-related learning capacity at the individual, group, and organizational level of organizations."

Chalofsky (1992) proposes a unifying definition after finding the common denominators of these seven definitions, "Human resource development is the study and practice of increasing the learning capacity of individuals, groups, collectives, and organizations through the development and application of learning-based interventions for the purpose of optimizing human and organizational growth and effectiveness."

The Lack of HRD Specific Research Issue

HRD borrows, applies, absorbs, and transforms knowledge, theories, and models from many other disciplines (Jacobs, 1990). But, for a field to delineate itself successfully, it needs some theories and models to "call its own." The field does have the *ASTD Models of Practice* and other theory/models of parts of the field (career development, organization development, training evaluation, etc.), all of which could contribute more to the clarification and definition of the field if they were tested in HRD specific research.

The Lack of Theoretical Model Building Issue

A preliminary review was conducted of the articles published in *Human Resource Development Quarterly* to examine these that discussed the need for theory/model building and the state of clarification and definition in the field of HRD. Jacobs (1990) makes several points about the need for theory/model building: 1) "focused theory development and research are important means of evaluating the relative status of an area of professional practice," 2) "the need arises to formalize the knowledge gained in practice into some logical structure," 3) "theory development and research are essential activities...keeping in mind that relevance to practice remains the ultimate criterion for the worth and value of theory," 4) "HRD research efforts must continually be guided by an underlying theory" and 5) "Theoretical knowledge about HRD must logically grow in an incremental fashion." He then cites the need for the generation of new propositions. Marsick (1990, 1990a), Passmore (1990), and Watkins (1990) all concur about the need for clarity and definition in the field achievable in part by integrating theory/models.

An exploratory study was conducted to determine the extent to which theoretical model building was evident in the literature. This study identified 614 dissertations that fit the key words "theoretical model building" listed in the *Dissertation Abstracts International* database covering the past 18 years. On review, the majority of the dissertations were found to be theory/models in such areas as computers, physical sciences (such as thermodynamics, hydrology, architecture, etc.), economics and political theory. Those even remotely related to HRD, training, management, and education numbered 37 or only 6% of the dissertations.

A more detailed analysis of the 37 dissertations was completed to determine both which were HRD specific, and which were not HRD specific but were related to the field. These dissertations were further analyzed to determine which developed a theory/model (using various methodologies/approaches), which refined a previously proposed theory/model (using various methodologies/approaches), which tested a theory/model (using various methodologies/approaches), and which utilized Dubin's methodology for theory/model building. This analysis yielded the results indicated in Table 1.

Most studies developed a theory/model but unfortunately, research was focused primarily on proposition rather than testing (only half of the theory-research cycle). Even those dissertations which were not clearly HRD but related to the field were theory/model development only. Another content analysis study was conducted to analyze the types of dissertations completed in a higher education administration department at one university (Sharpe,

1993) had as its first recommendation, "Dissertation research in the department should become more based on theory and contribute to building theory."

Table 1 - Theoretical Model Building Dissertations

37 (6%) Dissertations HRD or HRD Related Out of 614 Dissertations Matching Key Words "Theoretical Model Building" (100%)

27 HRD Dissertations (73% of the 37 Dissertations)							10 Related Dissertations (27% of the 37)	
Developed a Theory/Model 16 (43.3%)			Refined a Theory/Model 8 (21.6%)		Tested a Theory/Model 1 (2.7%)	Utilized Dubin's Methodology 2 (5.4%)	Developed a Theory/Model 10 (27%)	
"Adoption of Mediated Knowledge in Organizations: Source Credibility and Information Usefulness" by Watts, 1998 "Organizational Learning and Process Innovations: Formalizing the Dynamics Through a Social Network Approach" by Tinaikar, 1997 "Preserving and Transferring Knowledge-Based Resources During Post-Acquisition Implementation" by Ranft, 1997 "Developing Trust in Teams Within Health Care Organizations Surviving Dynamic Environments" by Felix, 1997 "The Social Context of Interpersonal Citizenship Behavior: A Mid-Range Theory and Test of a Model" by Settoon, 1996	"Co-Learning Communities: A Hermeneutic Account of Adult Learning in Higher Education Through the Lived World of Cohorts" by Lawrence, 1996 "Cultural Focus in Emerging Learning Organizations" by Owens, 1996 "Charismatic Chief Executive Officers: Are They More Effective? An Empirical Test of Charismatic Leadership Theory" by Agle, 1993 "Outdoor Experiential Management Training: A Substantive Grounded Theory About Process and Outcomes in One Training Program" by Black, 1993 "Leveraging Organizational Resources" by Nada, 1993	"Toward a General Model of Human Behavioral Systems" by White, 1992 "Critical Concepts Impacting Opportunities for Promotion: A Qualitative Study" by Husmann, 1991 "A Framework for Determination of Strategies for General Manger Trans-formational Development" by Thorsell, 1990 "A Theoretical Model of Professional/ Staff Development from a Liberation Perspective" by Earls, 1983 "Personal Control in Organizations" by Bazerman, 1980	"An Extension of the Job Characteristics Model for a Service Economy" by Tonges, 1997 "A Middle Range Approach to Theory Development for Service Organizations" by Becker, 1992 "Organizational Locus of Control and Professional and Career Commitment as Predictors of Resistance to Work-Related and Organizational Change" by Rhinehart, 1992 "New CEOs and the Helm in Large Firms: The Relationship of the Succession Context to Subsequent Organizational Change and Performance" by Baumrin, 1990	"Career Development Model: Organizational Support, Development, Supervision, and Individual Career Motivation" by Strickstein, 1989 "Termination Behaviors During Social Change: Empirical Tests of Selected Theoretical Propositions" by Alexander, 1984 "Employee Withdrawal from Work: A Theoretical Integration and comparative Examination of Several Causal Models" by Wendelken, 1983 "A Situation Approach to Organizational Effectiveness in a Public Agency" by Hartenstein, 1981	"Team Building Effectiveness in a Police Union: A Test of a Theoretical Model" by Wieneiaw, 1979	"Toward a Theoretical Analysis of Action Science" by Shindell, 1994 "Using Dubin's Theory Building Methodology to Construct a Model of the Impact of Management Training" by Berardinelli, 1991	"Child-Centered Emergent Curriculum" by Singh, 1995 "Theory Building and Cycles of Violence: The Limits of State Coercion in Ethnonational Rebellions" by Tuttle, 1994 "Supplier Responses to Retailer Bankruptcy" by Johnson, 1993 "Through the Looking Glass: Principles of Image Management for College and University Administrators" by Myers, 1990 "Mediation Process: A Consensus Model Designed by Student Participants" by Pastorino, 1990 "Program Structures in Self-Direction in Independent Learners by Higgs, 1989	"Mediators' Assessments, Strategies and Tactics in Public Sector Impasses" by Young, 1989 "Toward a Theoretical Model of the Integration of Organizational Development Within the Administration of Higher Education" by Rogers, 1984 "The Development of a Model and Curriculum Design in Information Utilization for Education Students" by Rothstein, 1981 "An Exploratory Study to Construct and Investigate A Theoretical Model Unifying Humanism, Educational Alternatives, and the Educational Belief System Process" by Moses, 1980

Theoretical Model Building

There are various levels of theory - micro, macro, middle-range (Merton, 1968) and types of models - literary, academic, eristic, symbolic, postulational, formal, interpretive (Kaplan, 1964). After observing that theory, theoretical model, model, and system are essentially interchangeable, Dubin (1969, 1978) suggests that whatever level or kind of theory/model offered is acceptable for use in what he calls the "theory-research cycle." This theory-research cycle is a process of inquiry and knowledge development in which theories/models are created to explain or predict and then are tested and redefined or refined. This is a process of suggesting, testing, refining, suggesting, testing, and refining, etc. This is a process of clarification and definition.

According to Dubin (1978) there are several critical considerations about the theory/model and its linkage to the theory-research process. First, the theory/model is unlimited in its scope – only the limits of human imagination and reasoning set boundaries. Second, the theory/model is more than just statements of hypotheses or the presentation of variables – it has units, laws of interaction, boundaries, system states, propositions, empirical indicators, and hypotheses to be tested. Third, the adequacy of a theory/model is always and only determined by the logic of the reasoning used to create the theory/model. Fourth, the reality of a theory/model (how well it matches the "real world") is always and only determined by submitting the theory/model to testing and experimentation. Fifth, a theory/model is "scientific" if, and only if, the theory/model is submitted to empirical testing.

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Conclusion

Several ways in which theoretical model building can facilitate conceptual clarification and definition in HRD are by:

1) modeling the theoretical components of expert definitions in theory-research cycles towards a unifying definition of HRD,
2) modeling HRD specific research in theory-research cycles towards identifying gaps in HRD research,
3) modeling components of HRD towards delineating boundaries of the field,
4) indicating direction for future research efforts based upon propositions and hypotheses developed, and
5) enabling further dialogue and reflection in the field.

As Watkins (1990) says, "We need research and model building to figure out who we are." We need specific HRD focused research, and incremental theoretical model building to achieve more and more clarification and definition of the field.

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Bridging the Gap With a Multidimensional Performance Model

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This paper offers a complex, dynamic model in which three aspects of performance—capacity, process, and accomplishment—are defined at four levels of the organization—individual, group, organization, and industry. The model incorporates the resource-based view of the firm from the strategy literature with the systems perspective from the performance improvement literature. A selected sample of research from micro and macro fields of organizational studies is reviewed and categorized to illustrate the model.

Keywords: Performance, Systems, Multilevel Measurement:

Ever since Rummler and Brache (1992) introduced a performance improvement model that explicitly addressed levels issues, human resource development (HRD) professionals have been aware of the need to consider the interrelationships among individual, process, and organizational levels. Unfortunately this awareness has not manifested itself in either practical solutions or grounded theory. Swanson (1998) claims that the reason for this gap in knowledge and research is that HRD and performance improvement researchers have historically favored the psychological foundations of the field over its economic and systems foundations. "As a result, what is called organization development is reduced to individual development or team development in hopes of achieving improvement in organizational performance" (p. 12).

Sleezer, Zhang, Gradous, & Maile (in press) have proposed a *Systems Model of Performance* to aid in understanding levels issues and to focus on the interplay among three essential aspects of performance. Their model integrates the scientific management, instructional design, and systems views of performance into a three-by-three matrix with cells allotted to performance *capacities*, *processes*, and *accomplishments* at three hierarchical levels of the organization—*individual*, *team*, and *organization*.

The purpose of this paper is to build upon this work in three ways: (1) expand the model by adding industry to its hierarchical levels and incorporating the *resource-based view* of the firm; (2) clarify the model's definitional foundation; and (3) collect studies from across organizational research streams that illuminate issues related to each cell of the performance matrix. In the process of expanding and further defining the *Systems Model of Performance*, a new configuration emerged that we call the *Multidimensional Performance Model*. This model led to several discoveries related to a dynamic view of organizations and performance improvement.

Expanding the Original Model and Clarifying Definitions

Holton (1998) suggests that HRD professionals too often use the "individual lens" in addressing performance issues, while strategic management researchers tend to confine themselves to the organization and industry lens. By adding the industry level, we address this gap and transform the performance matrix into a multidisciplinary model. The resulting model frames the organization as a complex, dynamic entity comprised of interacting subsystems that also interrelate with other complex systems outside organizational boundaries (Boulding, 1956). Bringing the industry level into the matrix allows for consideration of the organization's performance among its competitors and its relationships to market and economic forces. It also permits consideration of the *resource-based view* of the firm.

The resource-based view (Barney, 1991) is the first theory of the firm growing out of the field of industrial/organizational economics to incorporate human factors in a significant way. Proponents of this view acknowledge that the idiosyncrasies common to complex organizational systems may be the source of sustainable competitive advantage (Reed & DeFillippi, 1990). These idiosyncratic resources—many of which are embedded in the social subsystems of the organization—include human and organizational capital such as unique product or market knowledge and cultures that support risk-taking, innovation, and responsiveness. Because they are acquired over time, these resources are path-dependent. They also may be causally ambiguous because they result from processes that are not easily visible to or understood by competitors. Another way to think of such resources is as outcomes of organizational learning (Glynn, Lant, & Milliken, 1994; Senge, 1990). The learning process is the glue

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that ties process and outputs together over time and increases their value to the organization. The accumulation of such idiosyncratic learning—what Sleezer, et al. identify as *capacity*—can be the source of future growth and performance leading to competitive advantage.

Sleezer and her co-authors use a baseball analogy to illuminate the meaning of *capacity*, *process*, and *accomplishment* at three hierarchical levels. Using their matrix as a starting point, we added the industry level, further clarified and expanded definitions, and reordered the cells. The results are shown in Table 1.

Table 1. Multidimensional Performance Matrix Definitions

	Capacity	**Process**	**Accomplishment**
Individual	The accumulated bundle of individual capabilities and resources available for present and future work requirements (such as decision-making, adaptation, innovation, and learning).	Patterns of actions and interactions carried out by individuals using resources (information, machines, and people) to produce output designated by their jobs or to create innovative outputs.	The outputs of an individual's work activities that add value to the organization.
Group	The accumulated, idiosyncratic bundles of group capabilities and resources available for present and future organizational activities (such as high-speed decision-making, adaptation, innovation, and identification of strategic issues).	Patterns of interaction carried out by two or more individuals with resources (information, machines, and people) to produce collective output designated by their organizational unit or to create innovative outputs.	The outputs of formal and informal group work activities that add value to the organization.
Organization	The accumulated, idiosyncratic bundles of skills, knowledge, and tangible and intangible assets embedded in the formal and informal organizational structure and culture available for strategic decision-making, adaptation, and innovation leading to competitive advantage.	Patterns of interaction carried out by the organization and its subsystems with resources (information, machines, organizational members and groups) to produce output designated by organizational goals and mission or to create innovations.	The outputs of an organization's activities that increase its value and perpetuate its existence by satisfying its stakeholders
Industry	The accumulated bundles of skills, knowledge, and interorganizational linkages shared by organizations competing in the same market available to support and sustain industry evolution.	Patterns of interaction carried out by the organizations competing in the same market to produce mutually beneficial output or develop innovations.	Outputs derived from the competitive interrelationships of organizations operating in the same product markets.

The *capacity* aspect of performance includes the classic tangible resources—land, labor, and capital as well as all organizational processes, capabilities, firm attributes, information, and knowledge that enable the firm to develop and implement value-creating strategies (Barney, 1991). Idiosyncratic resources include the experience, intelligence, relationships, insight, and judgment that reside in the firm's formal reporting structure and coordination systems and its informal networks. The components of *capacity* are derived in three ways: (1) they are brought in from outside as the firm acquires physical, financial, and human capital; (2) they are developed within the firm by direct processes such as designing organizational systems; and (3) they are generated through learning as the indirect by-products of organizational activity.

In defining *process*, we assume interaction to be a necessary condition. The patterns of interaction that are considered process also must result in either (a) outputs designated by the job, the organizational unit, or the organizational mission or (b) unintended outputs or innovations that emerge from the process. The definitions in the *accomplishment* column focus on outputs that are valued by stakeholders. The term "valued outcomes" may include

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products, services, and new knowledge acquired as a result of organizational processes that can add value to future outputs (Nonaka, 1991 Lado & Wilson, 1994).

The three aspects of performance have distinctively different characters. *Capacity* is a reservoir of diverse tangible and intangible assets and capabilities that are brought to the firm from the outside or generated as by-products of the firm's activities over time. By contrast, *process* requires interactions over time, and *accomplishment* describes an end state—the outcome of a process.

Research Review and Discovery

We reviewed multi-disciplinary research with the intent of producing a representative sample of literature that could help scholars and practitioners in using the Multidimensional Performance Matrix. Although not exhaustive, our review included studies from human resource development, organizational behavior, industrial/organizational psychology, industrial sociology, organization theory, and strategy. We specifically sought research examples to exemplify each of the twelve cells in the matrix and limited our search to major journals and research published since the mid 1980s.

We were immediately struck by the variety of ways in which performance was defined in organizational research. Many studies with a macro focus used traditional quantitative global measures such as return on investment (e.g., Miles, Snow, & Sharfman, 1993) and profitability (e.g., Eisenhardt, 1989). Studies with a micro focus used such quantitative measures as task performance (e.g., Kirkpatrick & Locke, 1996; Morrison, 1993). There were also studies from both micro and macro fields that used goal achievement (e.g., Pritchard, et al., 1988; McGrath, MacMillan, & Ventakaraman, 1995; Browning, Beyer, & Shetler, 1995; Hill & Hellriegel, 1994). In addition, several studies measured performance as change in terms of adoption of innovation or new technology (e.g., Robertson, Swan & Newell, 1996; Elg & Johansson, 1997) and decision adoption (e.g., Nutt, 1993). The studies that relied on qualitative methodology used more divergent measures ranging from supervisors' evaluations of performance (e.g., Atwater & Yammarino, 1992), to self-reported perceptions of performance (e.g., Cohen & Ledford, 1994; Youndt, Snell, & Dean, 1996), changed cognitive schema (e.g., Poole, Gioia, & Gray, 1989), decision merit (e.g., Dean & Sharfman, 1996), quality of group process (e.g., Prussia & Kinicki, 1996), and satisfaction (e.g., Campion, Medsker, & Higgs, 1993).

Levels Issues

Not only were performance measures widely varied, but many studies crossed two or more hierarchical levels as well. Among these studies were several examples of misspecification and the cross-level and contextual fallacies common in multilevel research (Rousseau, 1985; Klein, Dansereau, & Hall, 1994). In some studies data was aggregated from one level to draw conclusions about performance at a higher level without acknowledging the threats to validity inherent in such manipulation Other studies made leaps of faith that conclusions observed at one level automatically existed at or affected performance at another. Several authors also were caught in the anthropomorphism trap by speculating about the collective organization as if it were an individual. In her seminal article on the pitfalls of multilevel research, Rousseau (1985) asserted that sound multilevel research explicitly delineates functional relationships and carefully links focal level with levels of measurement, analysis, and generalization. We found several studies that accomplished this by either explicitly restricting their theory, measurement, and analysis to a single organizational level (e.g., Smith, et al., 1991; Rowe & Cooke, 1995) or clearly acknowledging and confronting issues of multiple levels (e.g., Eisenhardt, 1989; Robertson, Swan, & Newell, 1996).

Levels issues are indigenous to organizational research. "By their very nature, organizations are multilevel" and "no construct is level free....To examine organizational phenomena is thus to encounter levels issues" (Klein, Dansereau, & Hall, 1994, p. 198). In creating a matrix that specified distinct boundaries between levels, we had understated the reality of multilevel phenomena in organizations. This realization led us to modify our research classification scheme by first determining whether the studies were single or multilevel in design.

Performance Aspects Are Fluid

Our review of the research also revealed that the Multidimensional Performance Matrix understated the fluidity of performance across the aspects of *capacity, process,* and *accomplishment.* In the majority of studies we reviewed, the *capacity* category actually resulted from or fed process. Classifying studies relative to *accomplishment* was also problematical. In the field, valued *accomplishments* were transformed into *capacity* and

served as fuel for further development of *process*. For example: successful products inspired further investment; effective alignment of organizational components with environmental forces contributed to greater organizational performance; and improved group processes fueled more effective decisions. Because of the fluidity of performance across aspects, finding studies that fit one and only one cell proved difficult. In short, the expanded and more clearly defined Multidimensional Performance Matrix proved insufficient

The classification difficulties we encountered resulted primarily from the divergent character of the three aspects of performance and their relationship to time. While *process* exists in time and *capacity* evolves through time, *accomplishment* is an end state and the means by which performance is ultimately measured. Although all three of the performance aspects can be considered performance variables; *accomplishment*, by definition, is necessary to the measurement of performance improvement. "Performance improvement can only be manifest through outputs" (Swanson, 1998, p.8). All the studies we categorized incorporated some measure of performance by specifying outcomes or accomplishments. Therefore, accomplishment was not useful in differentiating among studies. For this reason, we did not include a category for *accomplishment* in the classification scheme.

We also assumed that *accomplishment* was necessarily preceded by activity or *process*. "Performance cannot be described or improved without specifying its determinants, accounting for the sophisticated processes through which performance is expressed... and making some judgment about whether or not performance has, in fact, improved. (Swanson, 1998, p.1-8). This is the *process* to *accomplishment* flow that is central to a generic systems model of the organization. Because we assume that this link exists in every study of performance, we did not use it as a category for classification. The reverse *accomplishment* to *process* link, however, could be of interest in studies that examine the feedback of results related to *accomplishment* and used to fine-tune process. Most of the studies we classified were primarily differentiated by their focus on *capacity* or *process* or some combination of the two.

As a result of the discoveries made in our literature search, we categorized the representative studies as single or multi level in focus and as oriented toward *process* or *capacity* or one of the relationships between *capacity*, *process*, and *accomplishment*. The results are shown in table 2.

This multilevel, multiaspect classification scheme is a more accurate representation of the performance research stream than the original framework proposed by Sleezer, et al. (in press). The expanded matrix includes multilevel studies (shaded rows) and multiaspect studies (shaded columns). The studies shown in dark shading with white lettering capture both multiple dimensions. Of the 35 studies shown, 18 are single level and single aspect, 4 are multilevel and single aspect, 8 are single level and multiaspect, and 5 are both.

Given the fit of studies in the matrix, three observations can be made. First, single-level research is common not only in the micro fields but also in the fields of organization theory and strategy. Second, *capacity* is a performance aspect that is supported by research. Third, the reciprocal link between *process* and performance is well-represented by research.

A New Model Emerges

Our review of the research indicated a need to revise the performance matrix. Once we realized that performance research could not be neatly classified by a singular aspect or level, we also discovered that the links between the aspects required a closer look. Clearly *process* shares direct and reciprocal relationships with both *capacity* and *accomplishment*. Organizations that learn by doing use processes that build capabilities as well as produce output. However, the nature of the relationship between *capacity* and *accomplishment* is not direct. *Capacity*, as defined in our model, is a reservoir of potential capabilities that must be put into action to produce output. Capabilities are unleashed through *processes* which serve as a mediator between *capacity* and *accomplishment*. If we accept that learning is an activity-based process, then we accept also that *process* is a mediator from *accomplishment* back to *capacity*. Without process intervening, there is no direct relationship between *capacity* and *accomplishment*. In this way, process becomes the dynamic center of our revised model shown in Figure 1.

Table 2. Representative Studies of Multidimensional Performance

	{Capacity}	Capacity ⇔ Process	{Process}	Accomp. ⇒Process
Individ.	Atwater & Yammarino, 1992 Quinones, Ford, & Teachout, 1995 Rowe & Cooke, 1995 Sujan, Sujan, & Bettman, 1988	Lurigio & Carroll, 1985 Yukl, Kim, & Falbe, 1996	Kirkpatrick & Locke, 1996 Morrison, 1993 Schnake, 1991	
Individ. & Group		Weick & Roberts, 1993	Prussia & Kinicki, 1996 Latham, Winters, & Locke, 1994 Walsh, Henderson, & Deighton, 1988	
Group	Campion, Medsker, & Higgs, 1993	McGrath, MacMillan, & Venkataraman, 1995 Nutt, 1990).	Cohen & Ledford, 1994 Banker, et al., 1996	Pritchard, et al, 1988
Group & Org.		Eisenhardt, 1989 Hatcher & Ross, 1991	Brooks, 1994	
Org.	Youndt, et al. 1996 Doty, Glick, & Huber, 1993 Jennings & Seaman, 1994	Dean & Sharfman, 1996	Thomas, Clark, & Gioia, 1993 Damanpour & Evan, 1984	
Org. & Industry		Hill & Hellriegel, 1994 Robertson, Swan, & Newell, 1996		
Industry	Miles, Snow, & Sharfman, 1993 Cool & Dierickx, 1993	Browning, Beyer, & Shetler, 1995 Smith, et al., 1991	Elg & Johansson, 1997	

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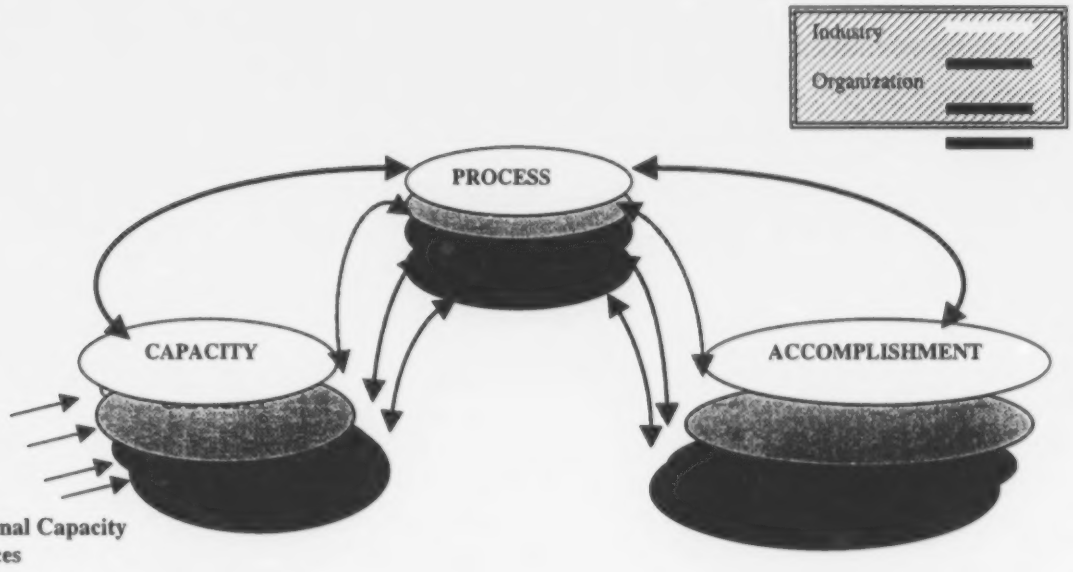
Figure 1. A Multidimensional Model of Performance



This graphic is overly simplistic in several ways. First, in addition to the arrows showing interrelationships within levels, there should be additional arrows between each aspect at one level and the adjacent aspect at every other level. We have omitted these to keep the figure readable. Second, the layered ellipses showing the levels should be understood to represent aggregates of units of progressively larger numbers. If the top ellipse represents a single industry, then the second ellipse represents the aggregate of several organizations in that industry, the next ellipse represents the collective groups within each organization, and the ellipse at the bottom represents the collection of individuals comprising those groups. To represent the true complexity of this concept, each level should be represented by increasingly more ellipses connected with interrelationship arrows within and across levels. The top most layer in the graphic must be understood to contain the most complexity in terms of numbers of sub-units and interconnectivity. The single arrows pointing into the capacity aspect at each level represent the composite of capacity components that come into organizations from the outside. This composite includes such elements as financial and human capital, investment by stockholders, technology, and regulatory concessions.

Implications for Scholars and Practitioners

Historically, the performance improvement field has been more grounded in practice than research (Sleezer 1991) and has suffered from a myopic focus on individual and group levels to the detriment of a more macro level view. The result of this situation has been a proliferation of practical models of performance in the absence of well-grounded theory (Swanson, 1998). On the macro side of organizational studies, there is a vast body of research on organizational performance motivated by the fundamental question, how does a firm establish sustainable competitive advantage? Strategists and organizational theorists have based their assumptions primarily on the traditions of industrial economics with its theoretical focus and seeming disinterest in practice (Conner, 1991). If performance improvement professionals can be said to suffer from myopia, then strategists are equally disabled by an inability to see things close at hand

Our primary purpose in this paper is to take a step toward bridging this gap by creating a performance model that integrates the micro and macro perspectives. The opportunity for such an effort is particularly ripe at this time due to the concurrent calls for a more comprehensive theory of performance in HRD (Torraco, 1998; Swanson, 1998; Holton, 1998) and the acknowledgement by strategists supporting a resource-based view of the firm that idiosyncratic human capital is critical to organizational success (Barney, 1991; Reed & Defillippi, 1990). We seized this opportunity by adapting a performance model from HRD (Sleezer, et al., in press) that proposed *capacity* as a

critical performance component and expanded it to include the industry level. We then defined the *capacity* aspect of performance in a way that incorporated both the HRD and strategic views of human capital.

Our second purpose was to extract examples from the literature that could bring the model to life. This research review led us to several significant discoveries related to model dynamics. The Multidimensional Performance Model that emerged can serve as a springboard for exploring both macro and micro perspectives from different fields. Performance improvement professionals who previously were familiar only with research from the HRD perspective may become interested in work from the strategy literature such as that of Eisenhardt (1989) and Robertson, Swan and Newell (1996). These studies not only offer a macro perspective but also tackle the difficult problems presented by multilevel research while exploring the dynamic interrelationship between *process* and *capacity*.

The incorporation of *capacity* into the Multidimensional Performance Model also gives organizational learning a specific place in the performance equation. Numerous research questions arise from the construct of *capacity* and its relationship to learning and performance. For example, how is learning captured at the multiple levels in the organization? What processes come into play in the transfer of learning from one level to another? What processes are necessary for the application of learning to enhance accomplishment? Do groups learn in the same way as individuals or are there collective processes that are unique to group cognition? (e.g., Weick & Roberts, 1993).

Finally, by specifying levels, the Multidimensional Performance Model also brings levels issues to the forefront. Many questions related to these issues remain unexplored by performance improvement researchers. For example, what isomorphisms exist between processes and constructs that are well understood at the individual level and similar processes at progressively higher levels of collectivity? Several of the studies reviewed here explore well-established individual processes at the collective level such as goal-setting and collective efficacy (e.g., Latham, Winters & Locke, 1994; Prussia & Kinicki, 1996; Pritchard, et al., 1988). Many of the studies reviewed also offer new ways to measure performance across levels that performance professionals could use to justify lower level interventions (e.g., Dean & Sharfman, 1996; Walsh, Henderson & Deighton, 1988, Nutt, 1990). Still others suggest creative ways to fortify qualitative measures with quantitative ones that lend credibility to results for both practitioners and theorists (e.g., Eisenhardt, 1989; Damanpour & Evan, 1984).

Conclusion

The tendency of the performance improvement community to use a "single lens" in developing research and interventions leaves us in a difficult position. No matter how well we perfect our intervention techniques and measurement models, we find ourselves struggling to justify the impact of our efforts on the organization as a whole. One way to fill this gap is to carefully examine the links among individual, group, organization, and industry levels and the links across the *process*, *accomplishment*, and *capacity* aspects of performance. By analyzing these links and their direct, measurable effects on critical outcomes at the organizational level within the competitive environment, broader insights become available.

The Multidimensional Performance Model presented in this paper can be used as a framework for expanding our vision. It is a dynamic, comprehensive model that encompasses all levels of performance critical to organizational success. It also specifies *capacity* as an aspect of performance that ties the field of organizational learning to the resource-based view of the firm proposed by scholars in the field of strategy. When the near-sightedness that has characterized performance studies in HRD and the far-sightedness common to studies in organization theory and strategy come together, the result is a significant improvement in vision across the spectrum of performance improvement research and theory.

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Contributing Factors to the Success of Women and People of Color in Leadership Roles: A Message to HRD Professionals

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Non-white males (NWM), non-white females (NWF), and white females (WF), identified by their peers as leaders in the field of education, were surveyed by telephone interviews and mail questionnaires to learn whether they experienced barriers to advancement into leadership positions and, if so, the strategies they used to overcome those barriers. Respondents credit family, peer, and mentor support and give suggestions to other women and people of color and to HRD professionals for enhancing advancement.

Keywords: Leadership, Gender Diversity, Cultural Diversity, Training

This study of women and people of color in leadership roles is of those in vocational education; however, it could be of women and people of color in any professional arena, and the results can be applied to industry and service organizations as well as education.

Problem Statement

Studies continue to report underrepresentation of women and people of color in administrative and leadership roles in the field of education and, particularly, in vocational education (Darden, 1991; Leonard & Papa-Lewis, 1987; Marshall, 1984; Troupe, 1993; Young, 1991). In addition, as noted by Troupe (1993), "oversight by the research community for vocational education has created a void in research studies and current statistical data on people of color. . . . New studies are long overdue. . . . Significant data that are current and complete are not available" (p. 3). Troupe's research identified only sixty-one African-American state-level administrators nationwide and called for more new studies examining underrepresentation of people of color.

Theoretical Framework

This work can be viewed in the light of communication, culture, and contingency theories. Theories of communication and culture are intertwined and cannot be separated. The most basic communication theory states that the message received by an individual is not the same as the message that was sent to the individual. The difference is primarily due to interpretation within the perspective of the recipient. If people of different cultures are added to this same communication model, additional and different perspectives are automatically included, multiplying the opportunities for misunderstanding, misinterpretation, and miscommunication of messages. This, in turn, contributes to malfunctions within the contingency theory. Contingency theory concerns organizational structure and the fit of substructures into the organization as well as the fit of the organization in its environment. The following literature review demonstrates that misunderstanding, misinterpretation, and miscommunication stemming from cultural differences (whether due to gender, race, or ethnicity) can lead to overlooking good, perhaps exceptional, "fits" of qualified people for organizational roles.

Literature Review

It appears that women and people of color face similar barriers in their advancement to leadership positions, but several facilitators for their advancement are also reported.

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Barriers to Advancement

Women and people of color experience both external and internal barriers to advancement, but external barriers appear to be far more significant than internal barriers. External barriers are organizational, referring to "those environmental variables that may mediate entrance into the administrative hierarchy" (Leonard & Papa-Lewis, 1987, p. 195). Internal barriers are "those that are psychological in nature and that are aspects of the personality, values, and attitudes of the individual" (p. 195). Although external and internal barriers are clearly interactive, the greatest differences among barriers appears to be within the internal barriers, those that are psychological in nature and are the result of socialization.

Internal Barriers

The internal barriers identified for women were *role conflict* (Adkison, 1981; Bowers & Hummel, 1979; Darden, 1991; Metzger, 1985; Morrison, 1992), *limited career aspirations* (Johnston, Yeakey, & Moore, 1980; Pottker & Fishel, 1977), *low self-image* and *lack of self-confidence* (Grengg & Thompson, 1982; Hennig & Jardin, 1977), *fear of success, lack of aggressiveness,* and *unwillingness to take risks* (Cottrell, 1976; Gross & Trask, 1976; McMillan, 1975; Schmuck, 1975).

Only two of the above internal barriers were identified for people of color: *role conflict* (Adkison, 1981; Alexander & Scott, 1983; Nieves-Squire, 1992; Ortiz, 1982; Shivers, 1985) and *lack of self-confidence* (Young, 1991). However, several additional internal barriers were identified for people of color: *lack of organizational savvy* (Morrison, 1992; Valerde, 1980; Young, 1991), *ineffective communication skills* (Young, 1991), *insufficient education* (Valerde, 1980; Young, 1991), and *inappropriate focus on issues of race and ethics* along with *hypersensitivity* to these issues (Young, 1991).

External Barriers

The literature indicates that external barriers--those that are present in the environment--are far more significant than internal barriers. Morrison (1992) stated, "The most significant barriers today are the policies and practices that systematically restrict the opportunities and rewards available to women and people of color" (p. 33). The external barriers faced by women and people of color were identified as lack of commitment to and enforcement of *sex- and race-equity policies* (Marshall, 1984; Morrison, 1992; Murphy, 1988); *lack of access to informal networks* (Baugher & Martin, 1991; Leonard & Papa-Lewis, 1987), *stereotypes* held of women and people of color (Adkison, 1981; Murphy, 1988; Shakeshaft, 1987; Terborg, 1977), *white-male values and attitudes* towards these groups (Baugher & Martin, 1991; Darden, 1991; Marshall, 1984), *lack of role models, mentors,* and *sponsors* (Baugher & Martin, 1991; Morrison, 1992), *tokenism* (Kanter, 1975; Ortiz, 1982), *lack of opportunities for leadership preparation* (Grengg & Thompson, 1982; Morrison, 1990), *lack of support networks* (Jones & Montenegro, 1983; Murphy, 1988), and *infighting* (Morrison, 1991). One additional barrier was identified for women: *sex-typing of jobs* (Brown, 1979; Kanter, 1975; Marshall, 1984). Also, the literature noted that women of color face the especially difficult situation of suffering the barriers for both groups, the "double whammy" of sex and race discrimination.

Facilitators for Advancement

Many more barriers were noted in the literature than facilitators. The facilitators were almost always general in nature. Hence, the facilitators are simply presented here in list form:

- Changing hiring policies (Shakeshaft, 1987).
- Developing and providing mentors, sponsors, and role models (Alexander & Scott, 1983; Marshall, 1984; Shakeshaft, 1987).
- Placing women and minorities in positions of power (Shakeshaft, 1987).
- Providing access to relevant training programs (Alexander & Scott, 1983; Jones & Montenegro, 1983; Leonard & Papa-Lewis, 1987; Marshall, 1984; Shakeshaft, 1987; Troupe, 1993).
- Developing personal and social supports (Alexander & Scott; 1983; Jones & Montenegro, 1983; Marshall, 1984; Shakeshaft, 1987; Shivers, 1985).
- Identifying clear criteria for success and making it known in the organization (Marshall, 1984).
- Implementing affirmative action laws (Oklahoma State Department, 1975; Shakeshaft, 1987).
- Obtaining experiences to prepare women for leadership (Oklahoma State Department, 1975).
- Being the best qualified for the job (Murphy, 1988) or developing impeccable interpersonal and technical skills (Alexander & Scott, 1983).

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- Having extraordinary effort recognized and rewarded (Murphy, 1988).
- Having formulated specific strategies for advancing goals (Alexander & Scott, 1983).
- Having participated in team sports when children (Hennig & Jardin, 1977).

Some of the best facilitators are personal characteristics and skills. African-American women administrators in California community colleges stated that personal characteristics and skills necessary for successful administrative careers are self-confidence, fairness and objectivity, decision-making skills, intelligence, flexibility, organizational ability, good health, conceptual skills, patience, humor, interpersonal skills, enthusiasm, and communication skills (Shivers, 1985). Alexander and Scott (1983) noted that the most frequently reported personal characteristics of successful African-American female administrators were unwaning self-determination; willingness to dream and share those dreams with people who can turn them into reality; willingness to take risks; and viewing work as a career, not just another job.

Purpose Statement and Research Questions

The purpose of this research project was three-fold: (1) to identify successful women and people of color who are presently in administrative and leadership roles in vocational education, (2) to identify barriers to attaining those roles as experienced by study participants, and (3) to identify strategies by which study respondents overcame barriers to attaining positions of leadership in vocational education. To address these purposes, the authors had to determine (1) the barriers, if any, individuals overcame to become leaders, (2) the strategies used to overcome barriers, (3) assistance and support, if any, provided to women and people of color along their career paths, and (4) subjects' suggestions for enhancing advancement of women and people of color into leadership and administrative roles.

Methodology

Two data gathering strategies were used in this project: telephone interview and mail survey. This article presents the mail survey portion of the project.

Questionnaire Development

Information from the literature review and preliminary analysis of the telephone interview data was used for questionnaire item development. The draft questionnaire was evaluated for face and content validity, completion time, and interpretation and comprehensibility by a five-member advisory panel representative of the population. Following revisions based on their feedback, the instrument was field tested with volunteer members of a graduate-level class concerning two-year post-secondary institutions. Twenty persons completed the questionnaire and provided feedback and time estimates.

Sampling

Those invited to participate were nominated by their peers in the field. Thus, leaders were recognized as such by persons in national- and state-level positions in vocational education. Nominees then nominated others whom they considered leaders in vocational education, resulting in second- and third-tier nominations. This process facilitated location of 320 white women and people of color who are leaders in vocational education. Because a few nominations were incomplete, only 308 nominations could be used.

Sample

Surveys were mailed to the 230 people who were not part of the telephone interviews. Four surveys were undeliverable. Of the 226 delivered questionnaires, 161 (71.2%) were completed and returned. The demographic data indicated that these individuals were primarily in administrative roles.

Data Analysis

Data from the surveys were entered into an SPSS computer software program and, in keeping with the usual analyses of a descriptive study (Babbie, 1986), were analyzed for means and frequencies.

Results

The major sections that follow are related to the research questions. From the data, a profile of the respondents was compiled that indicates their overall demographics, perspectives of leaders and success, organizational barriers to leadership development, personal strategies for overcoming barriers, organizational facilitators, and suggestions for enhancing leadership development.

Demographics

A general overview of the respondents revealed a profile of married men and women over forty-five years of age who are highly educated and primarily white females or African-Americans. A closer analysis, however, identifies these groups as non-white males (NWM), white females (WF), and non-white females (NWF). Interesting similarities and differences exist among the groups.

For example, a higher percentage of NWM (78.6% of 14) over 45 years of age are in leadership positions in vocational education than are either WF (58.1% of 105) or NWF (58.8% of 34) over 45. Of the non-white respondents, 64% of males and 47% of females are African-Americans. At least 50% of each group have a master's degree and at least 32% of each group have a doctorate degree. The majority of NWM (78.6%) and WF (59.0%) are married compared to 38% NWF.

Perspectives of Leaders and of Success

Just as respondents' demographic and workplace backgrounds are needed to provide context for the results of the questionnaire, so are their perspectives of the attributes of leaders, definitions of success, and critical factors that contributed to their becoming leaders.

Leaders

When asked for their definitions of leaders, differences and similarities occurred among the groups, but primarily differences were between men and women, rather than among ethnic or racial groups. From a list of 35 descriptors of leaders, 93% of NWM chose *resourceful*, *honest*, and *competent* as descriptive of a leader. These were followed by *supportive* and *effective* (86%). The most frequently chosen descriptors by WF were *articulate* and *communicator* (87% each), closely followed by *supportive*, *competent*, and *visionary* (85.7% each). Non-white females also chose *articulate* most frequently (91%), followed by *supportive* and *honest* (88%). In comparison, *articulate* was selected by only 64% of NWM. In this case, differences were among males and females, not among ethnic or racial groups.

Success

From a list of eight phrases for defining success, respondents from each group most frequently selected the phrase *personal fulfillment*. White females (58%) and NWF (53%) were in greater agreement, however, than NWM (36%). Only NWM indicated another popular choice, with *helping others* ranked first choice by 29%. Again differences were by gender.

Contributors to Success

A list of 18 critical contributors to success was generated from responses to the phone interviews. In general, WF demonstrated higher levels of agreement on the descriptors than did the other groups. White females' most frequently identified contributor to success was *education* (86%), and the most frequently identified contributor of NWF was *determination* (74%). NWM (71%) added *self-esteem* to tie three descriptors as the most critical contributors to their success: *education*, *determination*, and *self-esteem*.

For both groups of females, *family upbringing* was included in the second-highest level of agreement (WF, 83%; NWF, 71%). Among WF, *self-confidence* tied with *family upbringing*, and among NWF, *education* tied with *family upbringing*. *Self-esteem* earned the third-highest level of agreement (68%) among NWF. *Determination* was third (81%) among WF. Clearly, all subgroups view *education*, *determination*, and *self-esteem* as critical contributors to their success.

Organizational Barriers to Leadership Developments

Respondents perceived most of the barriers to their advancement into leadership positions to come from within their organizations and to be differentially posed to NWM, WF, and NWF.

Barriers Respondents Overcame

From a list of 16 barriers (Table 1) generated from responses to the phone interviews and from the literature, NWM indicated that *racial discrimination* is the greatest barrier posed by their work organizations, 86% (n=14) noting this barrier. Non-white females indicated *racial discrimination* and *lack of network system* as their greatest barriers, 41.2% (n=34) noting each of these barriers. The *lack of networking system* also is a significant challenge to NWM (50%) and WF (41.9%). White females reported *gender discrimination* as the greatest barrier posed by their work organizations. However, this barrier was not reported by NWM and was ranked 13th by NWF, based on percentage of respondents who indicated it is a challenge.

The second most frequently reported barrier by WF (53.3%) was *family responsibilities*; it was the fifth most frequently reported barrier by NWF (25.4%), and the tenth by NWM (14.3%).

Personal Strategies for Overcoming Barriers

As would be expected of leaders, respondents took the initiative to develop their skills and prepare themselves for advancement. They chose two courses: higher education and leadership development opportunities.

Pursue Further Education

Respondents were asked to rank 12 strategies for overcoming barriers to advancement of women and people of color--at least 61% of each group responded. The first-choice strategy implemented was *sought further education*. Other choices offered were *networked, worked harder, became more visible, sought other opportunities, reapplied for positions, attended self-improvement seminars, sought mentors, waited for another opportunity, redefined career goals, relocated, and sought career counseling*.

Develop Leadership Skills

Most respondents actively worked to develop their leadership skills by attending leadership courses and workshops/seminars; conducting leadership workshops/seminars; and assuming leadership roles in professional, work, and community organizations. High percentages of all groups attended workshops/seminars (86-97%). Over 91% of the women used that method to develop their leadership skills.

All respondents of each group answered the question about activities they had undertaken to develop their leadership skills. Very high percentages (74-94%) from each group are active in leadership roles in professional, community, and work organizations. Women, particularly, assume leadership roles in their work organizations: 91% of WF and 94% of NWF. These exceptionally high percentages reflect women's strategies to overcome organizational barriers to advancement.

Table 1. Rank Order of Challenges Overcome by Respondents in Each Group

NWM (n=14)	*%*	*WF (n=105)*	*%*	*NWF (n=34)*	*%*
Racial Discrimination	85.7	Gender Discrimination	70.0	Lack of Networking System	41.2
Lack of Networking System	50.0	Family Responsibility	53.3	Racial Discrimination	41.2
Too Few Openings	50.0	Lack of Networking	41.9	Too Few Openings	38.2
Cultural Discrimination	42.9	Too Few Openings	40.0	Lack of Mobility	29.4
Too Few Role Models	42.9	Conflict with Spouse Career	31.4	Family Responsibility	29.4
Lack of Influential Mentor	35.7	Too Few Role Models	31.4	Age Discrimination	26.5
Lack of Mobility	28.6	Lack of Mobility	28.6	Cultural Discrimination	26.5
Age Discrimination	21.4	Insufficient Education	23.8	Conflict with Spouse Career	23.5
Insufficient Education	21.4	Lack of Influential Mentor	22.9	Too Few Role Models	23.5
Family Responsibility	14.3	Age Discrimination	21.9	Lack of Self-Confidence	17.6
Lack of Self-Control	7.1	Lack of Self-Confidence	19.0	Fear of Success	17.6
Gender Discrimination	0.0	Lack of Assertiveness	13.3	Lack of Assertiveness	17.6
Parental Discouragement	0.0	Fear of Success	9.5	Gender Discrimination	15.0
Fear of Success	0.0	Parental Discouragement	6.7	Lack of Influential Mentor	14.7
Lack of Assertiveness	0.0	Racial Discrimination	1.9	Insufficient Education	14.7
Conflict with Spouse Career	0.0	Cultural Discrimination	1.9	Parental Discouragement	2.9

Organizational Facilitators of Leadership Development

Many respondents reported that their organizations have implemented culture (53-67%) and gender (46-67%) diversity appreciation programs, but perceptions vary as to whether their administrators value diversity and whether the programs are successful.

One criterion by which respondents judge the success of their organizations' diversity appreciation programs is whether the organizations employ more NWM and NWF in administrative and leadership roles than were in those roles five years before. Overall, the groups were negative about an increase of NWM (59-71%) and NWF (50-79%) in these roles. All groups (63-79%) perceived more WF to be in leadership roles than had been five years before.

In assessing their administrations' valuing of diversity, respondents, overall, produced means of 3.1 to 3.4 on a scale of one to five where one equals *not at all* and five equals *very highly*. The response distribution implies that respondents perceive some valuing of culture and gender diversity. These results correspond to respondents' general lack of enthusiasm when asked if they perceived more women and people of color in administrative and leadership roles now than were five years before.

In view of the data on valuing diversity, the data on respondents' perceptions of their organizations' success with these programs are not surprising. Overall, on a scale of one (not at all successful) to five (very successful), the highest concentration of votes by respondents from organizations that have already implemented valuing diversity programs indicate that respondents perceive their organizations' success with the programs to average between 2.8 and 3.1, moderately successful.

Respondents were given a list of possible factors that account for the success of their organizations' diversity programs: *administrative support, recognition of problem(s), implementation of program, program attendance*, and *voluntary attendance*. They were asked to rank the success factors on a scale of one (most important) to five (least important). Overall, *recognition of problem(s)* and *administrative support* were ranked as either first or second in importance by all subgroups, and *voluntary attendance* was perceived as least important for success.

Respondents also addressed reasons for failure of diversity programs. The highest-ranked reason was *lip service, but no action*, on a scale of one (most important) to five (least important. Other reasons addressed by respondents were *programs not backed by administration, organization members do not recognize the problem*, and *organization members did not attend programs*. This last reason was perceived as least important. This data complements the data on factors for success where voluntary attendance was also viewed as least important.

Respondents' Suggestions for Enhancing Advancement. Respondents were asked to rank five suggestions for enhancing advancement of women and people of color into administrative and leadership roles. All groups ranked *networking* and *mentoring* as their highest choices. *Mentoring* was the most frequent first choice of WF. Interestingly, higher percentages of each group either mentor or support others than have been mentored or supported themselves. From 71-86% mentor or support others in the field of vocational education. It is worth noting that the numbers of mentors inside and outside the field are basically equal.

Respondents' perceptions of the suggestions for advancing women and people of color into administrative and leadership roles relate to the strategies they have successfully used to overcome organizational barriers--seeking further education and developing leadership skills. Nonwhite males emphasize *internships, valuing diversity training*, and *leadership training* in addition to *networking* and *mentoring*; whereas, NWF and WF emphasize *leadership training* in addition to *networking* and *mentoring*.

In addition to ranking suggested strategies for overcoming barriers, respondents provided open-ended suggestions that fell into sixteen categories (see Table 2). In general, the suggestions are consistent with other responses; however, one unique item is the suggestion of cultural diversity and equity training for *administration* and *staff*. The respondents basically are advocating strategies they have utilized, but appear to believe awareness development remains important to advancement of women and people of color.

Conclusions and Limitations

Family responsibilities (WF, 53%) and discrimination remain barriers. White females reported gender discrimination was their greatest challenge, and NWF and NWM reported racial discrimination was their major challenge.

Participants identified strategies they have used to overcome barriers and recommended additional strategies to be used.

Strategies Used.

Seventy-four percent or more of respondents assumed leadership roles in professional and community organizations in an effort to develop their leadership skills. Even more, 86%, reported that assuming leadership positions in their work organization was a strategy for overcoming barriers to leadership positions.

Strategies Recommended.

Most of the recommended strategies for increasing the number of women and people of color in leadership positions were addressed to organizations. The most frequently stated suggestion urged administration's support of mentoring.

Mentorship is viewed as a good source of knowledge for the roles sought and a means of becoming aware of leadership development options. The WF surveyed most frequently chose mentoring as their first choice of five strategies, which included *networking, internships, valuing diversity training*, and *leadership training*.

Cultural diversity and equity training for administrators and staff were the second most frequently suggested strategies by the survey respondents. The organization's understanding of its norms and values is part of the clarification needed to facilitate moving forward to address existing barriers.

Table 2. Suggestions for Advancing Women and People of Color into Leadership Roles

Suggestions For HRD	*Suggestions For Women and People of Color*
Provide cultural diversity/equity training for administrators and staff	Seek opportunities to show your talents
Provide administrative support that encourages mentoring	Develop self-confidence
Provide grooming for leadership roles	Participate in internships
Encourage support systems	Be assertive, not aggressive
Provide role models	Seek additional education in the field
Provide opportunities to demonstrate skills	Develop a good résumé
Encourage networking	
Implement leadership development programs	
Actively recruit and provide job information	
Get rid of Good Old Boys Network	
Encourage hard work	

Among the previously mentioned strategies, networking was the first choice of the NWF and NWM surveyed. Administration's leadership in *creating networks* of employees is particularly useful for increasing communication within the organization, which improves access and understanding among employees.

In addition to creating networks, administrators should *encourage cooperation, collaboration*, and *community* by providing opportunities and incentives for diverse groups of students, faculty, and/or staff to collaborate on various endeavors.

Seeking *additional education* is a commonly used strategy and was recommended by survey respondents. They suggested funding, time-off, and moral support for those seeking degrees.

A straightforward and powerful suggestion was to *recruit* more women and people of color for leadership positions. Opportunities are essential to advancement into leadership roles.

The sampling procedure might pose limitations. First, the purposive, snowball sampling technique may introduce some bias in the study. However, given the lack of statistics and information on women and people of color in leadership positions, this sampling approach was necessary.

Also, because the population of this study, successful leaders, may have dealt with the far more numerous external/organizational barriers, internal barriers for potential leaders may be under reported. It should not be inferred that interventions may not be needed in this area.

Message for HRD Professionals and Contribution to the Profession

The primary recommendation from this study is to implement the strategies suggested by the respondents. The women and people of color in this study informed us that gender and racial discrimination continue to be factors. The environment that potential leaders from underrepresented populations must confront when dealing with the barriers associated with becoming established in leadership roles varies, but remains very unfriendly for many.

Lack of knowledge and skills appears to be a fundamental challenge. Providing access to knowledge and skill development opportunities is a continuing fundamental strategy for developing more leaders from among women and people of color. However, having the basic knowledge and skills to be a leader does not diminish other barriers or strategies.

Opportunities to demonstrate leadership potential and skills are critically needed for aspiring leaders. Work and professional organizations can and must do better, but opportunities in the larger community must also be used.

Access to information about the organization, skills required, training opportunities, and leadership positions remains a barrier within organizations. Networks and mentors are among the strategies used to address this information need. Information is power. It needs to be made available to all.

This study informs HRD professionals of the external and internal barriers to leadership roles as perceived by the women and people of color who have overcome those barriers. In addition, it contributes suggestions of those same experienced leaders for developing leadership skills in others and promoting women and people of color into administrative and leadership positions. If the vision for leadership includes greater representation by women and people of color, we must pay particular attention to the fact that many of the recommended strategies for improvement are beyond the individual person's control. External barriers are difficult to change; they have to be addressed by the existing leadership and HRD professionals.

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A Qualitative Assessment of Office Design Perceived by Older and Younger Workers to Impact Work

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This study examines the compatibility of office design for today's aging workforce. A cohort comparison was conducted utilizing an ethnographic method. The study identifies design characteristics perceived as facilitating and impeding work. Tentative findings indicate that both older and younger workers perceive similar design features as facilitating and impeding work. In particular, privacy needs surfaced as a primary concern of workers. Implications for human resource development (HRD) are discussed.

Keywords: Office Design, Older Workers, Qualitative

The present study attempts to inform HRD practice about office design features that accommodate the aging diversity in the American workforce. Demographic studies project that the aging population will play a significant role in the diversity of the American workforce (AARP, 1996; Brill, 1993; Hopkins, Nestleroth, & Bolick, 1991). Research to date has not examined the impact of office design on older workers; nor has research examined cohort perceptions. The research question for the present study asks: "What office design features do older and younger workers perceive as facilitating and impeding work?" Older and younger learners need a supportive work environment to help bridge the gap between the training environment and the practical work environment. The physical design of the workplace is a potential contributor to the transfer of training that is rarely examined in HRD research. HRD is in the business of improving performance. Training and development, therefore, should not take place in a vacuum for training sake; rather, it needs to occur in a larger organizational context that emphasizes the particular organization's mission and circumstances. This means that prior to setting up the training program emphasis should be placed on the organization itself, taking into account organizational issues that can impact the ultimate success or failure of the training intervention (Foxon, 1995).[1] This includes the appropriateness of the physical setting because of its potential impact on worker performance. Research examining individual, group and organizational performance documents that office design can enhance or inhibit overall organizational effectiveness (Brill, Margulis, Konar, & BOSTI, 1984,1985; Davis, Becker, Duffy, & Sims, 1985; DeMarco & Lister, 1985; Springer, 1986; Vischer, 1996). Based upon experiences since his 1984, 1985 research, Brill (1993) proposes that providing a supportive physical environment can yield a productivity benefit equal to 2 to 5 percent annual salary in all job categories.

The appropriateness of the physical setting for training transfer needs to be accommodated for in training and developing older and younger workers. It is an issue of increasing interest to HRD practitioners. An unsupportive physical environment can contribute to the failure of what otherwise may be sound training programs. For example, individuals trained to work in teams may not perform effectively when placed back into a physical environment with individual cubicles that do not accommodate teamwork. Work team effectiveness depends upon the successful management of group-organization boundaries, corresponding territorial control and a supportive physical environment (Sundstrom & Altman, 1989; Sundstrom, De Meuse, & Futrell, 1990). Conversations with a training specialist at a major university point to performance difficulties attributable to office design back on-the-job:

> In order for us within the Office of Human Resources Management to address the needs of the organization and its employees, we need to know more about the effects of the physical environment on work behavior. Quite frequently, in at least half of the [training and development] workshops I present, the discussion turns to difficulties attributable to workplace design. For instance, in a recent workshop on delegation skills, a supervisor cited her office's physical layout as an obstacle; in her opinion, the extremely open nature of the office makes it difficult to give effective feedback to employees, as other employees as well as students can hear all that is said. Similar stories, detailing the effects of physical design on routine work activities, are recounted weekly [personal communication, September 30, 1998].

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A supportive physical environment can contribute to successful training transfer. The physical environment is "not just a cost-center, but a benefit producer and a productivity tool that can be more purposively used" (Brill, 1993, p. 33). Sims points out that some companies are beginning to recognize the physical environment as an enabler of work processes: "The key is to integrate the physical environment with technology, management practices and work practices.
This allows employees to move where they are needed and to work where they are most productive and will be supported" (cited in Bencivenga, 1998, p. 70). For example, Hewlett-Packard and Owens Corning teamed human resource professionals with design professionals to create work environments conducive to work practices. Jakabuw oski, a workplace strategist at Hewlett-Packard, explains the company's strategy: "When most organizations are designing office spaces, they need to consider their employees—their human resources—and the way those individuals do their jobs; and that means HR professionals are, or should be, included in office redesign teams from the outset as a matter of successful business strategy" (cited in Bencivenga, 1998, p. 69).

The Aging Workforce

Demographic studies project that the aging population will have a significant impact on the diversity of the American workforce. The American Association of Retired Persons (AARP) projects that the most rapid increase in population growth will occur between the years 2010 and 2030, when the "baby boom" generation reaches age 65 (1996). The median age of the workforce was approximately 35 years in 1980, 37 years in 1990, and is projected to be approximately 41 years in 2005 (Brill, 1993; see also Hopkins, Nestleroth, & Bolick, 1991).

Organizations have raised concerns about the physiological decline of the aging workforce for some time (Ashcraft, 1992; Fox, 1951; Robinson, 1983; Welford, 1976). While laboratory studies indicate some decline in cognitive functions (e.g., cognition, cognitive speed, decision-making, memory, sensory factors, and perceptual-motion), negative effects of this decline appear to be absent from job performance (Salthouse, 1982). Salthouse (1982) theorizes that this may be because of the minimal demand level of most on-the-job activities when compared to laboratory tests, and work and life experiences gained from increasing age. For example, Machado and Smith (1996) investigated the impact of certain variables on productivity of work teams (i.e., service order completion) for service technicians at Bell South. Findings determined that the teams at the top ten percent in productivity were older, had much more time on the present job, and much more service with the company than teams at the bottom ten percent in productivity. Research, also, indicates that productivity can decline with age where specific job-tasks or occupations relate to the degree and type of physical effort, such as reaction time and speed of performance (Ashcraft, 1992; Robinson, Coberly, & Paul, 1985; Sheppard, 1976). Robinson, Coberly, and Paul (1985) reviewed a number of studies on occupational performance with age, concluding that "environmental conditions are important in mitigating the effects of decline in aging workers" (p. 519). Environmental conditions provide the physical context of work place design through barriers and field characteristics. Zeisel (1984) describes barriers as the physical elements that keep people apart or join them together, physically and symbolically, through walls, screens, objects, and partitions. He describes field characteristics as the physical elements that perceptually alter the physical context through shape, size, orientation, lighting, acoustics, and air quality. Ashcraft (1992) proposes that structural changes in workplace design may need to be made to support the physiological decline that occurs for older workers. While this seems intuitively valid, the impact of design barriers and field characteristics on aging worker performance empirically has not been examined. With the increasing workforce diversity, how to accommodate office design needs to facilitate job performance for both older and younger workers, also, warrants empirical examination.

Research Methods

Twenty-four administrators participated in the study, twelve older persons and twelve baby boomers. All twenty-four administrators are actively involved in their work within the same geographic area. The older persons work for nonprofit service organizations and the baby boomers work for profit and nonprofit service organizations. Work responsibilities and tasks are similar between groups. The twelve older administrators consisted of two persons, 60-62 years, and ten persons within the age range of 64-78 years. The twelve baby boomers consisted of four persons, 50-53 years, and eight persons within the age range of 38-45 years. The present study did not include ages 50-59 in the sample of older persons as the investigator believed that the sample cohort comparison of office design needs

probably would be more pronounced by sampling higher age groups, especially in the cohort of 64+ years. (This is due to the physiological changes that occur with increasing age.)

Heuristic elicitation was utilized to interview the 24 administrators. The Heuristic Elicitation Methodology (HEM) is designed to analyze complex issues by exhausting the range of respondent perceptions concerning the variables being examined, to determine beliefs associated with the issues, and to identify interrelationships among the issues. As a cognitive ethnographic method, the basic assumption of the HEM is that it is possible to match particular items and attributes with particular cultural values (Harding & Livesay, 1984). HEM procedures help to establish authenticity through the nature and format of the questions asked, followed by content analysis techniques (see Denzin, 1978; Denzin & Lincoln, 1994; Goetz & LeCompte, 1984). HEM stimulus materials are respondent-generated and data respondent-categorized rather than investigator-generated and investigator-categorized. This preserves the language and conceptualizations of respondents and decreases the likelihood of overlooking significant attributes of a domain being examined (Spradley, 1979; 1980).

Structured interviews were conducted with each administrator over a 30-90 minute period. The structured interview is the first phase of the HEM, called the Domain Definition. The Domain Definition is an open-ended interview in which the language of the respondent is used in a series of interlinked questions, with answers recorded verbatim. Using the respondent's own language in the questions helps to establish a shared meaning of language. The HEM consists of several elicitation phases, however, any elicitation phase can be used individually and stand alone as a separate investigation (Harding, 1974). The methodology is predicated upon the idea that "language provides a powerful entry to cultural meaning structures" (Harding & Livesay, 1984, p. 75).

The Domain Definition identifies domains through semantic relationships in terms of behavior, artifacts and knowledge that people have learned or created. A "domain" is a set of categories organized on the basis of a single semantic relationship (e.g., "X" is a kind of "Y"; "X" is a way to do "Y"). The research instrument for the present study was designed to elicit information primarily about physical features followed by psycho-social features, perceived as facilitating and impeding work. The 14 questions asked avoided "referential meaning" by asking for "use" through contrast, similarity, uniqueness and the ideal in an effort to exhaust a domain (see Spradley, 1979; 1980). The following questions illustrate the nature and format of questions used in the present study:

Q. What are the different kinds of things that you do, or try to do, or try to get done in your office? [Answers = "X"]
Q. For/when "X", what conditions, or office features, or situations make it <u>easier</u> to conduct "X"? [Answers = "Y"] PROBE: What else might make it easier to conduct "X" other than "Y"?
Q. For/when "X", what conditions, or office features, or situations make it <u>harder</u> to conduct "X"?
Q. What kinds of things are important for you to be able to have in your personal office work area? [Answers= "X"] PROBE: When, at what times, or in what situations is having "X" important to you? [Answers = "Y"] PROBE: When else, other than "Y", would "X" be important for you to have in your personal office work area?

The investigator conducted a domain analysis utilizing content analysis procedures (see Spradley, 1979). This involves sorting through interview responses and identifying patterns, categories, or themes. A worksheet was developed that displayed semantic relationships. Possible cover terms and included terms that appropriately fit the semantic relationships were searched for in the data. Making systematic use of this kind of worksheet helps to uncover domains embedded in the interview responses (Spradley, 1979). Each physical item and attribute and psycho-social feature, perceived to facilitate or impede work, was represented in some domain category. Key participants reviewed the domain categories for accuracy and gave positive feedback (see Creswell, 1994; Merriam, 1988). A system of cultural meanings that older and younger workers use to denote and connote physical and some psycho-social features of the office was uncovered.

Findings

Physical Items and Attributes

Older and younger workers do not appear to differ in their perceptions about types of physical features that impact work. Elicited responses by older and younger workers indicate that similar types of items and attributes are perceived to facilitate work:

> [my office] would have up-to-date technology, meaning computer, printer, a good phone system;

would have a window;
adequate lighting;
the computer is vital, I can't imagine doing the job without it;
filing space is important, and I've added a larger filing cabinet to my space;
books, always books--I keep a supply of reference books;
larger desk with more drawers;
plenty of office space, four walls and a door;
a facility [that's] planned well for groups;
being close to the people I work with, personal interaction with coworkers is very important.
[verbatim responses by older workers]
[having] a computer, printer, etc.;
computer support; have windows--I can see windows through other spaces, so I can get some environmental clues even though it is an interior office; good lighting;
have enough space for all of the office equipment;
a place with and for reference materials;
have an area set aside just for storage;
big desk to spread things around; larger work area;
easy access to other cubes for team effort;
[being] close to my coworkers, so if I need anything, it is easy to locate different personnel;
a separate workspace for meetings and interviews that is quiet and multi functional.
[verbatim responses by younger workers]

The domain analysis revealed that the physical features mentioned most frequently by both groups as facilitating work are: up-to-date information technology; large enough workspace; close proximity to conference rooms, equipment, reference materials and supplies; windows; adequate work surface; and being near co-workers.

Elicited responses by older and younger workers also indicate that similar types of items and attributes are perceived to impede work:

my office is too small, office furniture is not adequate;

the lack of storage space that makes for a messy appearing office environment;

not having the equipment and everything we need to work with;

no windows.
[verbatim responses by older workers]

[having] the typical Dilbert cube; multiple people being in one office;
[my space is] too small, can't fit everything I need to work with, some stuff is stored elsewhere;
too small, not made for us, used to be an old lab, so we don't fit;
not enough work office, not enough room for storage, full of office equipment, no windows, etc..
[verbatim responses by younger workers]

Lack of office space, lack of storage space and lack of windows, as well as inadequate equipment appear to impede work for both older and younger workers. The individual workspace being too small was mentioned most frequently by both groups.

Privacy Issues in the Workplace

Salient psycho-social features perceived by older and younger workers as facilitating and impeding work, also, were elicited during the interviews. Psycho-social features elicited most frequently by the workers relate to privacy issues. Responses by older and younger workers indicate that similar privacy features of the work place are perceived to facilitate work:

more need for concentration time with lack of interruptions;
4 walls and a door;

no more than 1 door, so that interruptions can be kept to a minimum;
avoid interruption;
a secretary who takes our calls;
avoid outside noise;
silence;
my family pictures, every time I get frustrated I can look at them, it's a warm fuzzy;
individual office with privacy, with space I have control;
[personal workspace] big enough to meet with as many as 4 to 6 people comfortably, in private;
walls to the ceiling;
always avoid partial walls.
[verbatim responses by older workers]

being able to concentrate;
I get distracted easily, I need to be isolated;
my office is away from traffic, it is secluded;
being able to close the door;
not being bothered by the phone and the public;
no distractions;
no walk-in traffic;
room to individualize [with] pictures on the wall when you need to spend a lot of time in there;
close proximity to work area and conference rooms for meetings [to have] more privacy for support staff;
full walls;
no cubicles.
[verbatim responses by younger workers]

Responses by older and younger workers also indicate that similar privacy features are perceived to impede work:

distracting noise;
the level of noise;
voices of surrounding coworkers;
being interrupted;
interruptions by flow of traffic;
having an open door policy;
too many walk-ins;
if wanted to concentrate, have to work hard to get away from distractions;
probably the general crowding;
lack of privacy and crowding; hard to talk confidentially.
[verbatim responses by older workers]

noisy [office] because it is in the main traffic area;
noise level that interferes;
ringing telephone;
being interrupted by other people;
too convenient for people who want to kill time to stop by and kill time;
cramped; the sense of being closed in and that you couldn't swing a cat in one office;
some of the nature of the work we do should be confidential--it is tough with cubicles--and we have no formal conference area for meetings.
[verbatim responses by younger workers]

Uses of the term "privacy" in work environments generally reflect the regulation of interaction, which encompasses retreat from incoming stimulation (generated by people and environmental stimuli) and information management, that is, outgoing information (Sundstrom, 1986). The particular privacy features perceived as facilitating and impeding work in the present study are common meanings found in the privacy literature on work environments. (See Justa & Golan, 1977; Kupritz, in press; Oldham, 1988; O'Neill, 1994; Sundstrom, Herbert, & Brown, 1982; Zalesny & Farace, 1987). Being able to concentrate, being isolated, avoiding interruptions, and avoiding acoustical distractions are examples of regulating incoming stimulation for privacy. Having an individual

office with space to control and room to individualize an office with pictures on the wall are examples of the need to control and to personalize one's space. Altman (1975) theorizes that this need serves the main function of privacy, which is to help maintain a person's self-identity. Physical features such as having a door, an office away from traffic, conference space(s) for confidential meetings--either in one's own office or close proximity, and walls to the ceiling represent barriers used to regulate incoming stimulation and outgoing information for privacy. Privacy features perceived as impeding work are indicative of the common complaints about privacy found in the literature.[2]

Altman (1975) theorizes that the most basic privacy need is to optimize social contact (with both incoming stimulation and outgoing information) and to avoid crowding. Findings from Sundstrom, Town, et al. (1982) suggest that the next need may concern mental concentration and the avoidance of distraction, interruption, and noise. Where neither crowding nor concentration poses problems, autonomy and conversational privacy may become salient as the third need.

Implications for HRD

The theoretical considerations presented in the study, though still in their formative stage, provide a beginning knowledge base about office design features perceived by older and younger workers to impact work. The present study indicates that age diversity in the workforce does not appear to influence the overall types of design items and attributes and privacy features perceived to impact work. Older and younger workers perceive similar types of office features as impacting work, even with the physiological changes occurring in aging workers. Pending further research, structural changes to the office may not be necessary to accommodate older workers. This potentially can prove cost effective to organizations as they strive to support workforce diversity. For most American companies, facility-related expenses (i.e., real estate and equipment) represent the second largest organizational asset at about 25% operating costs, topped only by personnel operating costs at about 38% (Haworth, 1985; see also Becker & Steele, 1995). The study also indicates that privacy is a primary concern of older and younger workers that should not be overlooked when addressing the needs of an organization and its employees. This supports previous findings for younger to middle-age workers (Kupritz, in press). Generalizations, however, cannot be made at this time as privacy perceptions may depend upon the relevancy to the particular situation and needs of particular job types (see Justa & Golan, 1977; Kupritz, in press; Sundstrom, Town, et al., 1982).

The detail gained about cohort perceptions in this initial study warrants a larger study that measures the strength of item and attribute relationships and the relative importance given to office features by cohorts. This raises several questions. What is the strength of association between office design features and job activities performed? What weighting of importance do cohorts give to design items and attributes and privacy features perceived to facilitate work? Further studies also are needed to explore the impact of office design on informal and incidental learning for cohorts. The answers to these questions, along with the present findings, can help HRD professionals make informed decisions about the appropriateness of the work environment for older and younger workers as they practice new ways of working on-the-job. In a broader context, the present findings validate the physical environment as an enabler of work processes that offers an untapped resource for HRD intervention. Providing a supportive physical environment is an "opportunity to manifest support for the organization's purpose and learning" (Dutton, 1994, p. 469).

Footnotes

1. Studies examining the transfer of training report that the percentage of training that actually transfers is extremely low, and that much of it is extinguished over time (Broad & Newstrom, 1992; Georges, 1980; Grabowski, 1983; Kelly, 1982). Organizational issues that have been documented to impact training transfer include management and collegial level of support, availability of resources and technology to support transfer, timeliness of training
to try out new learning, training relevance, and potential application of training back on-the-job (Foxon, 1995).
2. Privacy research during the 1970's-1990's reveals that the inability to hold confidential conversations, lack of control over accessibility, the inability to avoid crowding, lack of autonomy over supervision, and distractions and interruptions can contribute to negative effects on job performance and satisfaction (Sundstrom, Burt, & Kamp, 1980).

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Consequences of Part-time Work for Full-time Coworkers: Procedural Fairness in Human Resources and Employee Reactions

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The effects of part-time work on full-time coworkers have not been fully investigated in the part-time work literature. Drawing on the fairness literature, this study explored relationships between having a part-time colleague, general and procedural fairness, workload, colleague availability, and part-time work advocacy. Implications for part-time work in organizations are discussed.

Keywords: Procedural Fairness, Work and Family, Employee Reactions

Alternative work schedules are increasingly common in the United States. Between 1982 and 1992, the number of temporary workers employed in U.S. organizations grew from 400,000 to 1,456,000 (Ansberry, 1993). Additionally, 24% of the new jobs created between 1992 and 1993 were part-time positions (Ansberry, 1993). Both employees and organizations acknowledge a growing need for the staffing flexibility offered by alternative work schedules, in particular, by part-time work arrangements (Goodstein, 1994; Pfeffer & Baron, 1988).

Voluntary Part-time Work: Effects on Part-time Employees

Past research in this area has concentrated almost exclusively on the effects of voluntary part-time work on the part-time employee (Barker, 1993). Overall, studies suggest that while part-time work may improve the part-time employee's home life by increasing flexibility in scheduling and by reducing the workload and role conflict experienced by the part-timer (Olmsted & Smith, 1989), people who choose to move from a full-time to a part-time work arrangement may be denied promotions, pay raises and may experience decreased autonomy, lowered career and personal satisfaction, and weakened connections to social networks in the work place (Barker, 1993; Negrey, 1993; Perlow, 1995; Powell & Mainiero, 1992).

Thus far, researchers have paid relatively little attention to the broader implications of voluntary part-time employment for the full-time coworkers of part-timers and for the organization as a whole. Results from three recent studies suggest that working with a formerly full-time, now part-time employee can have negative effects on full-time coworkers' career mobility, trust in the organization, and job satisfaction. By studying 15 years worth of career planning data for clerical workers at a large utility company, Barnett and Miner (1992) found that working with a temporary coworker can inhibit certain types of job promotions and career mobility of full-time workers, as compared with coworkers of solely full-time employees.

Pearce (1993), testing a sample of 223 employees and short-term contractors at a large aerospace company, found that full-time employees' trust in their organization is lower if they work with temporary workers than if they work only with full-time employees. In a similar vein, Davis-Blake (1994), using a national sample, found that the presence of permanent part-time employees is associated with lower levels of organizational commitment among their full-time coworkers. These studies have established the possibility that full-time coworkers of part-time employees may be more dissatisfied than the coworkers of solely full-time employees.

My goal in this study was to further explore the effects of part-time work policies and procedures on the full-time colleagues of part-time employees. I drew on the fairness literature – more specifically, on procedural justice theory -- to investigate the consequences of part-time work policies and practices for full-time employees working with part-timers, as well as full-time employees' reactions to such policies and practices.

Procedural Justice Overview and Empirical Research

A substantial body of research exists which explores the relationship between how organizations treat their employees and how employees perform for their organizations (e.g., Adams, 1965; Grover, 1991). Many researchers have concluded that fairness, or justice, is an important explanatory link in this relationship, and that concerns over organizational fairness arise with some frequency in the work place (e.g., Sheppard, Lewicki, &

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Minton, 1992). Sheppard, et al. (1992) identify those situations that call for organizations to make and apply policies and procedures as most likely to evoke employee concerns for fairness.

The procedural justice literature may be especially helpful in fully explaining how fairness perceptions and other attitudes surrounding part-time work issues are influenced. Procedural justice refers to the process or procedures by which organizational decisions or outcomes are reached (Sheppard, Lewicki & Minton, 1992), and many studies have shown that procedural justice plays a key role in determining employees' perceptions of fairness in the work place (e.g., Barrett-Howard & Tyler, 1986; Konovsky, Folger & Cropanzano, 1987). Several distinct facets of procedural justice have been identified and explored by previous researchers (Leventhal, 1980; Thibaut & Walker, 1975; Tyler & Bies, 1990). Leventhal (1980) identified six procedural rules which are critical to perceptions of procedural fairness: consistency of decisions, bias suppression, accuracy of information used in making decisions, representativeness of the interests of all involved groups in decisions ("voice"), and meeting ethical norms by decisions. Sheppard and Lewicki (1987) found that managers do, in fact, use Leventhal's rules to determine their perceptions of procedural fairness. Konovsky, Folger and Cropanzano (1987) conclude that Leventhal's procedural justice rules are integral to explaining employee reactions to organizational decisions. A wealth of strong empirical support links procedural justice with several important work attitudes (e.g., Alexander & Ruderman, 1987). Procedural justice has been found to predict employee job satisfaction, supervisor evaluations, trust in management, turnover intentions, and organizational commitment (Alexander & Ruderman, 1987; Konovsky & Cropanzano, 1991; Sheppard, Lewicki & Minton, 1992). Given the strong empirical support behind examining decision processes, it may prove useful to investigate the effects of procedural justice in part-time work situations. Organizational policies regarding part-time work among employees, the processes by which employees are allowed to switch to a part-time work arrangement, as well as the practices by which organizations and coworkers accommodate such arrangements, may have substantial impact on full-time employees' perceptions of organizational fairness and other work attitudes.

Hypotheses

Increased Workload

Part-time work practices may affect coworkers in a variety of ways; in particular, coworkers' workload may be adversely affected. Employees are responsible for a given set of tasks or responsibilities within an organization. These responsibilities are usually divided up among the members of a work group, according to specialty or availability of the employee. Grover (1991), in a study of coworker perceptions of parental leave policies, suggests that the process of distributing the absent employee's workload may be an important consideration in determining coworkers' perceptions of fairness and other attitudes. This relationship has yet to be explored in the context of part-time work, though it seems likely that most organizations will establish formal or informal policies regarding the distribution of workload when an employee becomes part-time. In a situation in which one member of the work group reduces his or her input at work by becoming a part-time employee, some responsibilities usually handled by this employee may be assigned by the organization to the full-time employees who work closely with the part-timer. Thus, it is proposed, that, as a result of their organizations' policies and practices regarding part-time work, coworkers of part-time employees report greater workloads than do the coworkers of solely full-time employees.

Increased Colleague Unavailability

Above and beyond an increase in workload, coworkers of part-time employees may also experience a certain amount of coworker unavailability. While part-time coworkers are out of the office for a significant amount of the work week, full-time coworkers can expect increased difficulties in scheduling meetings or consultations with their part-time coworkers. The unavailability of a part-timer is also an issue when coworkers need the part-timer to provide assistance on tasks requiring the part-timer's expertise. Finally, the need for full-time coworkers to update the part-timer on work-related information which the part-timer missed on his or her days off may also contribute to the full-time employee's perception of part-timer unavailability. Thus, it is hypothesized that coworkers of part-time employees report a greater sense that their colleagues are unavailable than do coworkers of solely full-time employees.

Moderator: Size of the Work Group

The size of the work group is proposed to moderate the relationship between working with a part-time colleague and full-time employees' perceptions of workload and colleague unavailability. Among employees who work with a part-time colleague, the smaller their workgroup, the greater the full-timers' perceptions of increases in workload and colleague unavailability. If the work group is composed of only a few people (and assuming that no one is hired to pick up the extra work, which seems a likely possibility in a professional organization), it is more likely that these few remaining employees will be required to complete the work not finished by their part-time coworker. Among employees who work solely with full-time colleagues, the size of the workgroup is not expected to have such an effect on perceptions of workload and colleague unavailability. It is hypothesized that the size of the work group moderates full-timers' perceptions of increased workload and coworker unavailability.

General and Procedural Fairness

While part-time work arrangements may raise important issues for coworkers' daily lives, from a human resource perspective, it seems critical to investigate whether organizational policies and practices regarding part-time work influence employee perceptions of the organization as a whole. In an attempt to determine the extent to which employee reactions to part-time work practices affect their overall views of how fair their organizations are, employees' overall perceptions of organizational fairness will be measured. It is hypothesized, then, that among those employees who work with a part-time coworker, those who perceive the process by which the part-timer's work schedule was determined to be fair will report greater perceptions of organizational fairness than will those employees who feel the process was unfair.

Advocacy of Part-Time Work

Additionally, the effects of part-time policies and practices on full-time colleagues' attitudes toward part-time work will be investigated. It is proposed that coworkers of part-time employees will advocate the concept of part-time work among professionals significantly less than will coworkers of solely full-time employees.

Method

Data were collected from 133 attorneys at 11 private law firms. Participants were divided into two groups: those who work with at least one part-time attorney (the "part-time" group, comprised of 40 attorneys), and those who work solely with full-time attorneys (the "full-time" group, comprised of 93 attorneys). All part-time coworkers of surveyed attorneys voluntarily became part-time after working at their firms in a full-time capacity. The overall response rate was 56%; the response rate was 60% among the "part-time" group and 54% among the "full-time" group.

Perceptions of workload were measured with a 13-item scale developed by Caplan, Cobb and French (1975). Measured with a 7-point agree-disagree response scale, items include "I feel rushed during the day" and "I have a lot of downtime at work." Colleague unavailability was measured with an 8-item scale developed for this study. Using a 7-point agree-disagree response scale, items were designed to measure the daily disruptions due to part-time coworkers. A sample item is: "It is easy to coordinate my schedule with the attorneys with whom I work"(reverse-scored). A principal-components factor analysis, no rotation, extracted a one-factor solution, explaining 42.11% of the variance. The size of the work group was measured with one open-ended item: "Including yourself, how many attorneys at your firm do you consider to be in your work group?"

Perceptions of general fairness were measured with Price and Mueller's (1986) distributive justice scale. Respondents were asked to rate how fair their outcomes such as pay, workload, and assignments were for this 6-item scale. Price and Mueller's (1986) 7-item scale measuring procedural justice, including six items capturing Leventhal's rules as well as an overall item, was used to measure perceptions of whether the decision process allowing their colleague to become a part-time employee was fair. Finally, an 11-item scale was developed to measure the degree to which attorneys advocate part-time work in law firms. Using a 7-point agree-disagree response scale, sample items include, "part-time work among attorneys is a good idea for other law firms" and "Part-time work among attorneys causes more disruption than it's worth (reverse-scored). A principal-components factor analysis, no rotation, extracted a one-factor solution explaining 51.25% of the variance.

Participants' tenure at the firm, gender, and likelihood of switching to part-time work in the future were measured (from 1 = very unlikely to 6 = very likely). Participants who work with at least one part-time attorney were asked an additional set of questions pertaining to part-time work at their firms. Participants were also asked the gender of their part-time colleague, as well as their extent of knowledge of the part-timer's employment contract, measured from 1 = nothing at all to 5 = a great deal.

Results

In order to test whether consequences of part-time work for full-time coworkers were of substantial enough magnitude to warrant attention from HRD professionals in organizations, a conservative test of the hypotheses was conducted: when applicable, coworkers of part-timers were compared, as a group, to a sample of coworkers of solely full-time employees. Means, standard deviations, intercorrelations and alpha coefficients for variables are displayed in Table 1.

Table 1

Zero-Order Correlations

Scales n = 133	M	SD	1	2	3	4	5
1. Advocacy	4.91	1.17	.90	- .15	- .06	-.29*	-.02
2. Colleague Unavailability	3.09	1.02		.80	- .41**	-.16	.34**
3. General Organizational Fairness	3.99	.84			.86	.25	-.28**
4. Procedural Justice	4.17	.82				.85	-.08
5. Workload	4.63	1.05					.87

Note. Alpha reliabilities of all scales are presented along the diagonal.
*p < .05, **p < .01

A series of t-tests were conducted to investigate whether participants categorized as coworkers of either part-timers or full-timers differed in important ways. Results, found in Table 2, show that the two groups are quite similar along several demographic variables. In the combined sample, only three participants (2% of the sample) had worked part-time at some time during their careers.

Hypothesis Testing: Comparisons of "Full-time" and "Part-time" Groups

Mean perceptions of workload in the part-time group (M = 4.76, SD = 1.00) and in the full-time group (M = 4.58, SD = 1.08) were not significantly different. A significant difference was found in perceptions of colleague unavailability among coworkers of part-timers and of full-timers, in the opposite direction than predicted (PT M = 2.83, FT M = 3.20, t (92.38) = -2.12, p <.05).

A t-test revealed no significant mean differences in perceptions of general organizational fairness between the part-time group (M = 4.13, SD = .80) and the full-time group (M = 3.92, SD = .85). A simple regression conducted to test whether, among employees who work with a part-time colleague, perceptions of greater procedural justice regarding the decision to allow the coworker to become part-time is a significant predictor of general fairness was nonsignificant. Finally, no mean differences among the part-time (M = 5.16, SD = 1.17) and full-time groups (M = 4.80, SD = 1.15) were found on advocacy of part-time work.

Table 2

Demographic Comparison of Part-Time and Full-Time Groups

Variable	Part-time group M	Full-time group M	t	Sig (2-tailed)	Male %	Female %
Tenure at firm (in years)	7.93	8.40	.26	ns		
Size of work group	11.12	8.55	1.95	ns		
Likelihood of switching to part-time*	1.81	2.10	-1.03	ns		
Overall sample of respondents					65.4	34.6

*Scale measured from 1 = very unlikely to 6 = very likely.

It was predicted that work group size would moderate the relationship between the work group (made up of either all full-time colleagues or including at least one part-time colleague) on perceptions of workload and colleague unavailability such that the smaller the work group, the greater the full-timers' perceptions of increased workload and coworker unavailability, but only if the full-timer has at least one part-time attorney in the group. The interaction between working with a part-time attorney or all full-time attorneys and work group size did not significantly predict colleague unavailability, but did significantly predict perceptions of workload $t(3) = 2.20$, $p < .05$. Coworkers of part-time attorneys report larger workloads than do coworkers of solely full-time attorneys, but only when they work in small work groups with part-timers. There are no differences in perceived workload among attorneys who work with part-timers and those who work with full-timers when the attorneys belong to large workgroups.

Advocacy of Part-Time Work and Procedural Justice

Given the significant negative relationship between advocacy and perceived procedural justice of the decision to allow part-time work schedules, $r = -.29$, $p < .05$, a hierarchical regression was conducted to test whether advocacy of part-time work explains unique variance in perceptions of procedural justice beyond that explained by participants' personal interests in becoming part-time themselves. When the likelihood of the participant becoming part-time is entered into the equation first, it significantly predicts procedural justice perceptions ($B = -.22$, $p < .05$), but advocacy is no longer a significant predictor ($B = -.02$, ns). Interestingly, men are significantly more likely than women to perceive that their firm's part-time employment decisions are made fairly ($r = .52$, $p < .05$). Male attorneys are significantly less likely to switch to part-time work ($r = -.46$, $p < .05$), and though this variable was not measured, it may be that male attorneys are more involved in setting their firms' policies regarding part-time work. More involvement in decision policies and potentially less personal involvement in these issues may contribute to gender differences in perceptions of the fairness of part-time policies and procedures.

Attitudes Toward Colleague Availability: The Role of Knowledge of the Part-Time Contract

A one-item measure of how much participants in the "Part-time" group know about their part-time colleagues' contracts was significantly and negatively related to colleague unavailability ($r = -.33$, $p < .05$). Thus, among attorneys who work with part-timers, the more they know about the specifics of their colleague's part-time work arrangement, the less they report their colleagues unavailable.

Discussion

Using procedural justice theory as a theoretical framework, this study investigated the effects of organizational policies and practices regarding part-time work on the work attitudes of full-time colleagues. The results of this study offer good news for organizations considering part-time work options for their employees. Allowing part-time work schedules among attorneys seems to cause few adverse effects for full-time colleagues' work attitudes. Contrary to expectations, coworkers of full-time attorneys experienced significantly more colleague unavailability than did coworkers of part-time attorneys. It may be that part-time attorneys maintain very specific, limited work schedules which are taken into account by their coworkers. Post hoc analyses support this conclusion: the more attorneys know about their part-time colleagues' work schedules, the less unavailable they perceive their colleagues to be. It may be that the more attorneys know about their colleagues' schedules, the more they temper their expectations to fit their colleagues' availability.

Results of this study do reveal a significant moderator of the relationship between whether the participant works with a part-time attorney and perceptions of workload. Attorneys who work with part-time colleagues report greater workloads when they work in a small group with their part-time coworkers. In smaller work groups, it may be that the connection between the reduced workload of the part-timer and the increase in workload required of the part-timer's colleagues is more direct and salient than in larger work groups. In larger groups, the part-timer's work might be distributed among more employees, thus requiring a smaller increase in workload for any one colleague as a result of part-time work. This finding does provide some initial evidence that colleagues of part-time attorneys do, in fact, experience some increase in workload as a result of their coworker's part-time employment, but this burden may be mitigated by the presence of more attorneys in the work group who can help to share the load.

Colleagues of part-timers also did not experience any sense of general unfairness as a result of part-time work practices at their firms. Surprisingly, attorneys' perceptions of the procedural justice of the decision by which the part-time attorney became part-time did not influence attorneys' perceptions of general fairness. Full-time attorneys' perceptions of general fairness also seem to remain unaffected by attorneys' perceptions of their firms' part-time policies. This finding seems to suggest that full-time attorneys may not be highly concerned with the fairness of the process and policies by which their firms address part-time work arrangements, a conclusion which seemingly contradicts Grover and Crooker's (1995) finding that even employees who didn't benefit directly from family-friendly policies offered by their company were more committed to their organizations than employees at firms without these policies. Interestingly, post-hoc analyses revealed that participants who were more likely to switch to part-time in the future were significantly less likely to believe that the policies and procedures by which their firms handle part-time work decisions are procedurally fair. Taken as whole, these findings suggest that participants who have a vested personal interest in becoming part-time, beyond a general advocacy of part-time work, are more likely to be concerned with the procedural justice issues surrounding part-time employment at their firms. The lack of a direct relationship between procedural justice and general fairness found in this study may also be interpreted to mean that in situations where procedures may never apply to the participant (such as asking for a part-time work arrangement), procedures are not important in determining perceptions of general fairness. More research should be conducted before any solid conclusions can be reached on this issue.

Conclusions and Limitations

Overall, the findings of this study do not offer strong support for the influence of fairness in determining coworkers' attitudes in part-time employment situations. Working with a part-time colleague does not seem to influence attorneys' general sense of whether they are being fairly treated by their firms, nor does the fairness of part-time policies and procedures seem to affect work attitudes of coworkers. It may be that instead of interpreting part-time work situations in terms of fairness, full-time attorneys rely on Deutsch's (1975, 1985) need principle instead: they may be sympathetic to their part-time colleagues' personal needs and are willing to accommodate them (Grover, 1991; Greenberg, 1987a; de Dreu, 1996).

Some limitations of the study warrant a mention here. As a correlational study, no clear statement of causation among the variables of interest can be determined. Further, all variables were collected from a single source, which introduces the potential for response bias in this study (e.g., Williams, Cote, & Buckley, 1989). Despite some recent evidence that response bias may not have the broad, comprehensive effects on research in organizations as was once thought (Crampton & Wagner, 1994), the possibility remains that relationships among variables may be inflated in this study due to response bias. Finally, the cross-sectional data collected for this study

may not be the optimal way in which to examine the relationships described in this research. If the key to explaining the effects of organizations' part-time practices on coworkers' relevant work attitudes is the adjustment of expectations, a longitudinal study may more fully capture the organizational and psychological processes which influence full-time employees working with part-timers.

Implications for Human Resources Management

The results of this study offer good news for law firms and other professional organizations considering part-time work options for their employees. The findings of this study do suggest three potentially cautionary notes to organizations regarding the implementation of part-time policies. First, attorneys who work in small groups with a part-time colleague do notice greater workloads than do attorneys in small, "full-time" work groups. Before allowing an employee to switch to part-time work, organizations should carefully consider how the workload in that employee's group can be redistributed in a fair manner. Second, employees may be more accepting of part-time work among their colleagues the more they know about the part-timer's reduced schedule. To foster acceptance of part-time work among full-time colleagues, firms may want to explicitly address the reasons for their colleague's switch to part-time work, as well as the time limitations of the new part-time schedule.

Finally, full-time attorneys who are interested in taking advantage of part-time work options in the future do not necessarily feel that the process by which their firms allow part-time work is fair. Interested coworkers may be well aware that colleagues who become part-time find that the extent to which their firms subsequently pass them over for promotions and other career opportunities far outweighs the benefits of their part-time work schedule. Organizations should be aware that employees interested in part-time work may not be at all satisfied with the way their firms treat part-timers. If they are concerned about reaping the potential benefits of allowing part-time employment among their employees, organizations should reconsider the ways in which they implement part-time work policies, as well as the effects of part-time employment on the career development of both part-time and full-time employees.

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Disability Disclosure, Recruitment Interviews, and the Employment Process

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Interviews were conducted with individuals with invisible and visible disabilities about disclosure, accommodations, and employment experiences. Individuals with visible disabilities disclosed to make the recruiter comfortable, to set the ground rules, and to undercover overt discrimination. Individuals with invisible disabilities disclosed only if necessary during the recruitment interview preferring not to disclose until employed and then only if accommodation became necessary.

Keywords: Disability, Disclosure, Selection

In employment interviews people with disabilities are often uncertain whether or not to disclose information about their disabilities and how much information is appropriate. Fear of offending the potential employer is ever present, along with the fear of being disbelieved or dismissed as incompetent (Reiff, Gerber, & Ginsberg, 1993). However, Title I (Employment) of the Americans with Disabilities Act specifies that persons with disabilities must disclose before a responsibility to accommodate exists at any point during recruitment, selection, or after employment. The issue becomes when to disclose disability status: during the recruitment and selection process, upon employment, or after a difficulty arises at work.

Research examines disclosure at the time of application, when scheduling the interview, during the interview and after an offer of employment has been made. Interviews of individuals with visible disabilities conducted prior to the passage of the ADA suggested that it was best to disclose disability status prior to the job interview (Huvelle, Budoff, & Arnholz, 1984). The reasons for this include: accepting oneself as a capable person with a disability, knowing the limitations of others "who will be overwhelmed by the disability and unable to give proper attention to the applicant's credentials" (p. 242), surprising an unprepared interviewer causes stress and discomfort creating lasting barriers, and considering it unfair not to give an interviewer time to consider the disability in terms of the work required (Huvelle, Budoff, & Arnholz, 1984). Participants cautioned that disclosing prior to scheduling an interview is not without risk. A practitioner's guide by Hughes and Graham (1994) suggested the decision to disclose should be based on if the disability is visible or invisible, accommodations will be needed, and future discovery of the disability will make the employer suspicious. They caution that an applicant should "first emphasize their job-related strengths, qualifications for the job, and ability to fulfill the essential functions of the job" (Hughes & Graham, 1994, p. 3).

Parry, Rutherford, and Merrier (1995) surveyed human resource managers who felt the type of disability determined when disability disclosure should occur. It was "recommended that employees with physical, visual, hearing, chronic, learning, or other disabilities disclose their conditions at or after the employment interview" (p. 294) while those in the health care industry thought that those with chronic disabilities should disclose prior to the interview. Overall they found that most managers preferred the disability disclosure to occur at or after the interview. Macan and Hayes (1995) found that recruiters gave interviewees higher ratings for interview presentation when the applicant with a disability willingly discussed the disability and encouraged the recruiter to ask questions. Individuals with disabilities that disclosed over the phone were evaluated more positively than able-bodied applicants, however when it came to the hiring decision, the able-bodied applicants were evaluated more positively (Tagalakis, Amsel, & Fichten, 1988). Individuals with disabilities who did not disclose prior to the interview were perceived as less honest and were less likely to be hired then those that disclosed. Parry, Rutherford, and Merrier (1996) found that business schools provide little information on disability disclosure either for their students with disabilities embarking on a job search or for students without disabilities who will have hiring power.

Hayes and Macan (1997) examined the effect of disability on hiring decisions finding that the applicant's self-presentation had a considerable effect on recruiter ratings for college students with disabilities and without disabilities. The student groups were interviewed under different situations. Government agencies specifically interested in hiring students with disabilities for summer jobs interviewed that group. The students without disabilities were competing for regular employment opportunities. Another study used video tapes of actors playing the roles of permanently disabled (wheelchair), temporarily disabled (crutches), and not identified as disabled persons (Christman & Slaten, 1991). The person with the temporary disability was seen as most hirable.

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next the person in the wheelchair, followed closely by the person without a disability. This might be due to: societal norms for being kind to persons with disabilities, socially acceptable responses, a belief that people with disabilities possess more favorable personality characteristics, and the fear of litigation or social disapproval for expressing negative attitudes (Christman & Slaten, 1991). Klassen, Jasper, and Harris (1993) concluded that "stigmatized traits do play a part in some types of employee decision making" (p. 196) and managers may be tempted to avoid hiring people "who possess a physical stigma" (p. 197) such as obesity, or physical or mental disabilities. The rationale is that hiring stigmatized people makes the other workers uncomfortable.

Method

The purpose of this study was to explore how adults learn to communicate what they need for accommodation to an employer or instructor. These questions were explored: (a) How does the individual self identify? (b) What types of information are needed to facilitate accommodation by instructors and employers? (c) Does the instructor or recruiter/potential employer have a stake in facilitating the self disclosure process? and (d) How does the instructor or recruiter/potential employer facilitate the self disclosure process? Grounded theory (Glaser & Strauss, 1967) was chosen because there is little research on disability disclosure and as Merriam and Simpson write, "A practitioner's knowledge is usually experiential and non theoretical. Grounded theory--if it has truly been generated from the situation and is 'grounded' in the data--will give the practitioner a conceptual tool with which to guide practice" (1989, p. 100).

Two categories of disability, visible and invisible, provide the basis for experiences that cut across specific disability type. Dividing disability into visible and invisible is more meaningful to the everyday experience of HRD practitioners and adult educators who do not normally possess a background in the medical model of disability. Two purposeful samples were compared: 7 students with invisible disabilities, and 8 students with visible disabilities. Interviews lasted forty-five to ninety minutes. The selection criteria were adult status, work experience, and recent enrollment in higher education. Transcripts from each sample were checked against the audiotapes, read, and read for coding. Several months went by between work on each sample to allow categories to emerge from each sample independently. Comparisons between samples were made after all samples were completely coded, and the categories were written up into descriptive text (Wolcott, 1994).

Findings

Participants with invisible and visible disabilities approach disclosure and interviewing differently. Participants with invisible disabilities believed disclosing would eliminate them from consideration for employment. Participants with visible disabilities disclosed to alleviate it as an objection.

Participants with Invisible Disabilities

Six of the seven participants lost jobs due to their disabilities. Jed lost his business because his disability prevented him from continuing as a potter. Mel was quietly terminated when the company's insurer found out that he had a back injury. Cat, Reba, and Nan learned about their disabilities because of difficulties with work. Participants in this sample had not begun a job search since returning to school. The only participant close to graduating was self-employed. Consequently, this sample had little experience with interviewing after diagnosis.

Cat gradually lost most of her vision, kept complaining, and tried a variety of things to make her data processing job accessible. After narrowly missing a child on a bike with her car, she went to a doctor, and quit her job. Reba and Nan became depressed, seeking counseling when they could no longer function in jobs they should have been capable of performing. Both were diagnosed with learning disabilities that affected the interpersonal skills of one and the writing skills of the other. Kim and Reba suggested accommodations to their employers that were denied. Kim was eventually terminated and Reba found a new job. Nan was fired, she believed unjustly, from a job she needed. She didn't understand why she was having difficulties, which caused her to become deeply depressed losing a year of school. A counselor diagnosed her with attention deficient disorder. Kim interviewed knowing she had a disability and did not disclose during the interview for fear of not being hired. Her description:

> The interviews were traditional interviews. As I said I chose not to disclose until I had to. I'm not altogether comfortable with that now that my asthma has developed into a more severe, chronic

> state. I think that to be safe I should disclose, but I'm afraid of not getting a position due to ignorance and fear on the part of my potential employer. (Kim 469-472)

Participants with invisible disabilities did not disclose on their resumes, nor did they choose to during an interview believing they would not be offered the job and "I don't think it would be necessary for them to know" (Nan 383). Cat would have to disclose because she needs an accommodation to read. Kim and other participants would disclose only after it became necessary. They felt they risked more by disclosing up front than after a situation arose even with the fact that there is no expectation of accommodation without disclosure.

There is a potential catch-22 situation when an individual with a disability needing accommodations to complete a college degree chooses not to disclose to an employer. It is highly likely that the job will use the skills and knowledge gained from the degree. It is reasonable that the individual will need similar assistive devices and accommodations on the job as he or she did in college. One result of waiting to disclose until it is necessary, is that a supervisor will question the individual's capability to do the job viewing this new information with suspicion.

Participants with Visible Disabilities

Five of the eight members of this sample had work experience after becoming disabled. Two participants had no work experience. Six had experience interviewing as individuals with disabilities and college degrees. Participants with visible disabilities disclosed on the resume and during the interview. Four had participated in disability related activities such as advocacy groups, sport competitions, and public speaking which they listed on their resumes. Disclosing during an in-person interview situation seemed redundant. The interviewer could see the person had a disability. This formal disclosure had three purposes: relieving the interviewer's tension and discomfort with the subject of disability, setting up ground rules on permissible questions, and uncovering evidence of discrimination early. Jed summed up the reasons:

> Many of them [interviewers] said afterwards I wasn't sure what to ask...I wanted to but I was afraid to ask. ...The way I see it is I don't want to have to go there and surprise them. I don't want the uncomfortable situation. The way I see it, if they don't want to hire me because I have a disability...then I don't want to work there. (Jed 366-372)

Breaking the Ice

In in-person interview situations the disability is obvious, however, necessary accommodations are not. Bess described her tactic, "it's obvious that I have a disability...[so I] would tell them that I've been in a chair since birth and I've worked a lot with children in a wheelchair. That hasn't been a problem" (Bess 282-284). Interviewers asked her, "how I would explain my disability to my students and what I would do and if I thought I could handle things. Do you think your students are going to be able to accept your disability?" (Bess 268-270). It was "only one school system" (Bess 278) that asked those questions. The other school systems "didn't really ask me all that much about my disability" (Bess 280). In fact the one that did hire her,

> Didn't really ask me all that much about my disability. I think I did volunteer that I've worked a lot with children and I've been able to handle them and recounted some experiences but they didn't ask a lot about my disability. (Bess 309-311)

Jed, an engineering student, made the interviewer comfortable, saying,

> Do you have any questions about how I work? Feel free to ask me because I don't know what to necessarily tell them because they don't know....I try to break the ice and say it's okay to ask these type things. That's how I do it now. But usually try to bring it up some time in the direction of the interview. (Jed 282-288)

He had four site visits, each company paid for his and his attendant's transportation and hotel accommodations, and received two job offers. Another engineering student, Pat, described his experiences, "One company has approached me with a second interview with them and the other three have called to let me know that they're still looking for an opening" (Pat 490-491). A difference in their recruitment experiences was Jed graduated in ten weeks, while Pat had three more quarters in school. Both were asked by their respective programs to enter graduate school.

Discrimination

Drake, blind since birth, had two interviews by phone. One was for a job in a distant state. He was one of the top candidates for the position and they were negotiating the cost of his transportation and lodging to get to an in-person interview. He thought it best that he disclose over the phone. He described the incident,

> I disclosed before I would have got the interview and I really think that had something to do with me not getting the interview. After I told them I didn't get the interview. And he says 'really the way our community is we don't think we can facilitate your accommodations because we don't have a great public transit here. It's going to be real hard for you to get music and stuff' and in my mind I thought it was that they figured it would be easier to get somebody, a sighted music teacher in there and I said then forget them. I don't want to work for somebody that's close-minded anyway. Because I always think that I'm going to be honest with people because I want people to accept me based on my abilities and what I can do. (Drake 228-241)

This experience was similar to the interviews he had in-person locally, not getting very far with those either. After completing his teaching certification, Drake tried to gain experience though substitute teaching. This seemed a sensible course of action for any person wanting full time employment as a teacher. Drake "went down and applied for a full time job which none were open" (Drake 268) so he asked to be considered for substitute teaching positions. He had another phone interview, this time without disclosing and was hired. He described the call,

> It was a standardized interview where they asked me questions about how I would deal with certain issues. Most of it had to deal with classroom management things and I didn't do any disclosure with them. The lady I interviewed with had no idea I couldn't see. Actually, I had the interview from my job ...at the Columbus Zoo....There were screaming animals in the background and there was no disclosure at all and she hired me right there on the spot. (Drake 276-282)

Everything went well for over a year until one day after taking an assignment and arriving for work, he was told they didn't need him anymore. Ironically, the previous year at the same school he substituted for the music teacher on maternity leave. Their excuse was that two classes had now been converted into one class making too many students for him to handle. He depicted the incident this way,

> I was turned down for an assignment. After I accepted it they canceled me because one of their classes, their choir class had 100 students in it. They thought that the classes were too big for me to handle. I went down there and raised a little cane about it. I said this is discrimination. I'm a qualified music teacher. I went down to the school to find out who they replaced me with. They wouldn't tell me. They wouldn't put it into writing that they said it was because I couldn't handle big classes was the reason they gave me. I went downtown to talk to sub services and the guy down there tried to turn it around and make it look like I had problems handling classrooms. I said look, we're going to have to do something about this. I'm going to have to get a lawyer and we're going to have to start talking about discrimination and they said we need to come up with some things to better facilitate your needs and I said my needs - when I go out and teach a class I said all I need is for students to realize I'm a qualified teacher and I can teach. (Drake 287-299)

The administration claimed a teacher with a visual impairment jeopardized the safety of the students in band or choir because he could not see them misbehave, and because the classes were much larger than the previous year. Every substitute teacher experiences difficulties with students, assignments, or lesson plans. Since he had worked in this school the previous year without being made aware of any negative performance evaluations, he had every reason to believe his classroom management techniques and teaching ability were acceptable. I have to admit I have a hard time envisioning him doing his job because I have a hard time understanding how one teaches music and how someone who is blind can teach music. There are many famous musicians without sight. The dilemma for me was, how can he read the music to help his students with it? However, the administration did not ask him how he managed to assist the students "read" and play the music. Drake described his technique,

> [Made] recordings of the tunes that they were playing. Brought them home, worked on them for a couple of days and I wrote my own scores. I grabbed a student out of the class that was a real proficient music reader and I picked out all the hard rhythms that I heard in the song that I thought the students couldn't get or needed help with...She would help me pinpoint exactly where it was and so I could communicate that to the band. So they could see it. (Drake 256-262)

He told me that since this incident he had been offered many special education assignments. He had, however, no training or certification in special education.

Job Duties

Jobs are described in a variety of ways to prospective applicants in print advertisements and during the interview process. Sometimes language is used to embellish a job and its importance. Jerry described an advertisement he answered,

> [The advertisement] was very misleading. I thought the ad pertained to being--it really led you to believe that you would be administrating services. It said something like administrating social services in a social service environment which is true but I'd be overseeing donations. Actually they ended up offering me the job but I turned it down. (Jerry 382-386)

Even though he uses a wheelchair, his disability did not make it impossible for him to fulfill "some responsibilities in moving donations" (Jerry 380). He did not accept the position because with a master's degree in social work he wanted something more challenging. He applied for

> Jobs where it was family preservation which is doing in-home visits. Neither one of the ads mentioned that there were in-home visits involved. I would be willing to get out of my chair [to crawl into an inaccessible home] because I do it all the time so it's not that big a deal to me. (Jerry 389-393)

His crawling into a home would be more of an embarrassment to the employer and client than to him.

Pat did not know how to make accommodating him less daunting to potential employers, an essential job function for electrical engineering is to read schematics. He explained,

> That's sort of a stumbling point during my interviews since a lot of times when you get into large schematics...they're enormous and that's hard to spend as much time as I do with a reader on a[n] item like that. (Pat 525-530)

If he offered the recruiter suggestions on how to accommodate, reading schematics would be diffused as an issue. Pat believed the solution was a "computer programming problem. But I feel that an electrical engineer could probably design some hardware and working with a programmer could get something to work" (Pat 536-538).

Previous Work Experience

Previous work experience can be instrumental to securing an entry level position for new graduates. Some participants had work experience prior to becoming disabled but that experience was not directly relevant to the new career choice. Others found it difficult to gain experience because they were born with the disability or acquired it shortly after high school graduation. Sandy described her "work experience as sporadic. The closest thing that I had to what you would consider regular gainful employment was a year as a Vista volunteer" (Sandy 419-420). Neither Pat or Sandy had experience directly related to what they are trying to do now, engineering and communications.

Some students with disabilities were not able to get paid work experience through internships and field placements because federal and state subsidies would be jeopardized due to regulations about funding and work. These benefits are necessary to continue Medicaid eligibility or tuition payments. The engineering program overcame this for Jed, "because she [assistant dean] wanted to see me be placed [and] I wanted to get some experience" (Jed 273) they created a job for him. After "I talked to one of my professors and they said don't take an internship where you don't get paid because if you do they [an employer] won't treat you the same" (Jed 274-276) as a new engineering student with paid experience. Summer time work was arranged designing a computer program,

Jed was paid through a scholarship for books. In this instance, a concerned advisor devised a way for Jed to gain paid experience without jeopardizing benefits.

Just A Pair Of Eyes

Accommodations are as varied as are individuals. They require an imagination expansive enough to take in the disability and the job creating a potential solution. Participants used half time work arrangements, brought their own computer to work, or needed "a pair of eyes." Some arranged all of their own accommodations because they felt totally responsible, and did not know of available assistance, or were so grateful for the opportunity to work they did not expect the employer to do anything. Sandy recalled,

> I think I said something to the effect of you don't need to treat me any differently than you would treat any of the other employees. The answer from her was like, 'Well surely we're not going to treat you any better than [the other employees]...The answer kind of shocked me. (Sandy 449-453)

This conversation ended with Sandy working half a day at home and the other half of the day in the office so that her new personal computer could stay at her home. She went on with the story,

> That did not work well because they felt that I might be taking advantage and goofing off at home so we brought the computer to work. The nature of the job was such that I had to do a lot of footwork and so the friend that I have now that does reading had just retired at that time. He did my driving for me. And then he would also come to the place. I don't know how I'm going to overcome this in the future...But he would come and he would help me with visual work there. That was never really talked about by me or by them...I must have asked cause I'm sure I wouldn't have just had him come in there. But I had the impression that they didn't really like it too much. (Sandy 461-470)

Sandy was working on a doctorate. I asked her about the types of accommodations she would need as a teaching assistant. Her answer was, "Just a pair of eyes" (Sandy 533) to:

> ...Take attendance. They would keep the grade book. When I would have an exam they would be there and keep their eye on the class to make sure no one was cheating. ...They would read me the papers and I would tell them how to grade them. (Sandy 543-551)

She will be teaching a speech class next year. She is "thinking about the gestures" (Sandy 571) and how to grade them since she cannot see them. Other accommodations required physical access as Mel put it, "It's obvious that if they need to come into a room in a wheelchair it's a little bit different than walking into it. You're going to need a different type of surrounding" (Mel 327-329). Or as Jerry said "the only thing I've had them do is put a ramp in front of the bathroom and raise my desk" (Jerry 451-452). Others "need a voice activated computer" (Mel 342) and "a track ball mouse with a table high enough for me to get underneath it" (Jed 293), relatively simple things to do.

Even though many accommodations are commonplace, like ramps, some supervisors seem to want to make things difficult. Bess taught a third grade special education class. The principal fought building a ramp for Bess to enter the school because she did not want to spend the money. After a year in the accessible room, the principal wanted Bess to change rooms from one end of the building to the other. It seemed as if the principal "didn't really think it through before she said it" (Bess 351). Bess continued:

> [The principal] moved me all the way to the other end of the school. She didn't want to build [a new] ramp. In case of fire she wanted me to have my kids go out the door that had the stairs and then go around the school to the door that I could get out and then go around the school and meet my kids. But the other teachers were like, no. (Bess 340-344)

Not only did this not seem reasonable from an accommodation standpoint, it created a potentially dangerous situation for the children and Bess.

Final Thoughts

Experience with employment and the employment process was limited for both samples. Faculty, career counselors, and students need to work together with business and industry to find meaningful internships for students with disabilities. This partnership can investigate ways to lessen overt and subtle discrimination against individuals with disabilities. As Cox (1993) writes,

> It is certainly prudent to include, among the many goals of organizations, social responsibility objectives such as promoting fairness and improving economic opportunities for underachieving members of society. It also seems fair to say that achievement of social responsibility goals enhances economic performance goals in the long term. (p. 12)

Students with invisible disabilities would not disclose during the interview for fear of not being hired. They believed it better to disclose after being hired only if an accommodation was necessary. Since it is invisible, people question the disability's existence or dismiss its impact. Participants with invisible disabilities were afraid that if they disclosed they would be treated as if they were less capable and intelligent. Research on many invisible disabilities is expanding. Young fields of study struggle with research agendas and acceptance by the general public and other related fields. Popular explanations of an invisible disability's affect on skills make the person seem less competent to a prospective employer. Both students with invisible and visible disabilities adopted strategies to avoid or lessen the impact of employer discrimination during the selection interview. Students with visible disabilities disclosed during a job interview for comfort, to establish ground rules, and to uncover discrimination.

Since, the social barriers to reentry to the workplace are great for individuals with disabilities, cultural diversity training should include information relevant to decreasing "negative stereotypes and prejudices" of nondisabled co-workers, and workers with disabilities themselves could also benefit from training that focuses on developing and sharpening their interpersonal skills" (Boyle, 1997, p. 267). It is important to develop an organizational climate that fosters trust between employees and management. Employees who need accommodations but are afraid to disclose for fear of losing the job cost the organization in lost productivity. Accommodations are simply tools that assist individuals work to their potential. Productivity is decreased when an employee is not working to potential (Cascio, 1994). The fear of discrimination on being discovered as a person with a disability can distract an employee from full participation in the workforce (Cox, 1993). Training and development programs that address workforce diversity should be expanded to include individuals with disabilities (Boyle, 1997). Training interviewers in non-discriminatory behavior during the selection process can reduce the costs of discrimination such as reputation, lost talent, legal and administrative costs (Cox, 1993).

Further research needs to be conducted on disability and work from the perspectives of individuals with disabilities and human resource professionals. Some questions for investigation are: how does disability disclosure affect the hiring decision during recruitment and selection, upon employment, or after a difficulty arises at work? What are the steps involved in successful disability disclosure?

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The Effect Of Study Skills Training Intervention On United States Air Force Aeromedical Apprentices.

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Study skills intervention was shown to significantly increase end of course scores, and decrease remedial instruction for 90 randomly selected students attending a 3 month Air Force allied health technician course. Additionally, students who received the study skills intervention graduated at a higher rate than those who did not. Study skills training, in a corporate setting can enhance student learning and significantly reduce training costs.

Keywords: Study Skills, Cost Savings, Student Performance

Our public education system and national network of colleges and universities are designed to enhance the capabilities of our most valuable national resources, our people. However, many of our educational institutions assume that people know how to learn and know how to study. The teaching of study skills enhance student ability to succeed both academically and in the workforce. An illustration of the value of teaching study skills can be found in the U.S. military. Recruits are brought on active duty, receive formal training and then are assigned a duty position in their career field. Students who fail in technical training are eliminated from active duty before they ever became a "productive member" of the Air Force at a cost of literally millions of dollars per year.

In 1998, a study examined the effects of a study skills training intervention course on U.S. Air Force Aeromedical Apprentices with five main purposes. The first was to examine the relationship between study skills training and the number of times students required academic interventions outside of normal class time. The second purpose was to examine the relationship between study skills training and end of course averages. The third was to determine the relationship between study skills training and the amount of additional instruction, measured in time, students required. The fourth purpose examined the relationship between study skills training and graduation rates. The final purpose was to recommend areas for further research.

Background and History

From 1995 through 1997, Dr Joy Vroonland (Ph.D. University of North Texas) conducted classes that were designed to help military technical school students with their study skills. Vroonland and one assistant gave this training to approximately 3,400 students annually. All of these students were assigned to the 882nd Medical Training Group in 16 allied health professional courses. She believed that the teaching of her study skills course enhanced student performance facilitating student success. However, her opinions were not substantiated by any real statistical analysis. She could not show that the effects of study skills instruction made an impact because the course was taught to all students. No empirical evidence could be shown on the possible positive effects of the study skills training. Moreover, the possible implementation of this study skills course throughout the Air Force depended on the results of an objective and well-designed study.

Statement of the Problem

There was a perceived problem at the School of Aerospace Medicine with regard to student disenrollments, washbacks and failure rates. The school expends a great amount of resources, time and effort to ensure student success. The average cost to train one student in the three month Aeromedical Apprentice course is $12,500.00 (Schommer, 1998). Students who fail the course of study and are eliminated from the program cost thousands of taxpayer dollars with no realized gain by the government or the student.

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Purpose of the Study

The purpose of this study was to determine the difference in academic interventions, grades attained, time spent in one-on-one instruction and graduation rates, between students who received study skills training prior to the start and during technical training and students who do not receive study skills training prior to the start and during technical training.

Hypotheses

Study skills course intervention was hypothesized to reduce the number of academic interventions beyond normal classroom instruction, improve higher end-of-course test scores, reduce the time required for one-on-one instruction for student tutoring beyond normal class room instruction and reduce the attrition (failure) rate.

Limitations

The study did not consider racial or ethnic differences in students as a separate variable since the Air Force does not consider race or ethnicity as a factor when recruiting or delivering instruction to Air Force members. The Air Force only considers race to ensure discrimination does not exist.

Delimitations

1. The sample of students was limited to DOD students attending the School of Aerospace Medicine, Aeromedical Apprentice Course, Brooks Air Force Base Texas, from December 1997 to May 1998.
2. One foreign student was excluded from this study due to differences in culture and educational experience as compared to American students.

Literature Review

An extensive review of literature was conducted and included civilian and military sources to fully investigate research on study skills intervention. Particularly noteworthy was McMurry's work "How to Study and Teaching How To Study", a 1909 effort which formed the foundation of many later works in the field. Walter and Siebert (1993) and Ellis (1997) provided excellent explanations of effective study skills methods. These works formed the foundation of the study skills model used in this experiment. Prather (1983) and Sterling (1996) conducted previous research in military training environments.

The National Commission on Excellence in Education stated that many students complete high school without disciplined and systematic study habits. This idea was highlighted in a 1984 study by Christian and Murphy demonstrating the idea that study skills are not taught in high school. Their survey included 479 students from three widely different high schools. In the survey, 74% indicated a desire to attend college, however 70% had not been trained in time management techniques. Additionally, 52 % of the students indicated that they did not typically listen before they began to take notes, and 52% also indicated that they had no system for note taking during class. A surprising 44 % indicated that they received no training on how to read a text book and 82% of the students reported that they studied less than three times per week. Christian and Murphy concluded that the majority of the students in this survey were not adequately trained in study skills. None of the three schools had an organized curriculum concerning the teaching of study skills even though students seemed to want training in how to study. It cannot be assumed that students entering our universities or service's medical technical schools have the appropriate level of study skills needed to succeed. The issue of students "not knowing how to study" is not new. McMurry (1909) made a passionate argument in his book "How to Study and Teaching How to Study" that most people do not know how to study, causing many to fail. The focus of this research was based on the premise that students who are very much alike can have differences in performance which are directly related to their command of study skills. The grade a student gets at the end of a module or a term is not only based on their intelligence but also their ability to use a given set of study skills for differing subjects or courses (McMurry, 1909; Marshak, 1984). Study skills can be better understood by viewing a "Study Skills Model" shown in Figure 1;

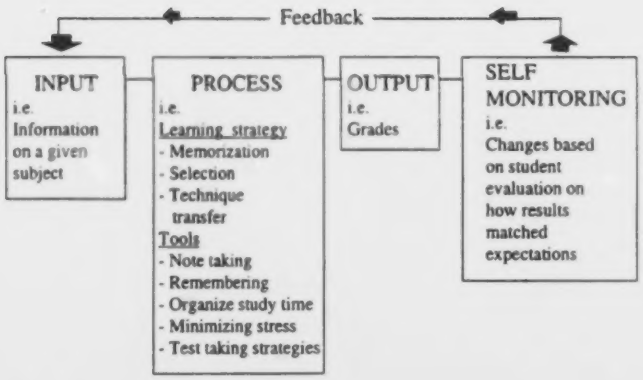

Figure 1. Study skills model.

The model shows four basic steps with a feedback loop used to evaluate the process of study skills and improve it if necessary. The first step is the input process of study skills and focuses on the receiving of information being learned. The second major step in study skills is the process of how the student assimilates data for later use. In this step, the student first determines whether the information has been learned in the past, or is new information. Then the student determines if the information should be memorized, if pertinent information needs to be gleaned from a large amount of information (Selection), or if the student should focus on a specific technique, (such as algebraic formulas) to be used to solve certain types of problems (Technique Transfer). After the student decides the learning strategy, he or she needs to apply the basic study skill techniques which involve effective note taking, remembering, organizing study time, minimizing stress and test taking strategies. The third step in this model is the output the student receives (usually in the form of grades). It is at this point that the student employs "self monitoring" (step four of the model) in answering the question, "did the results match expectations." The student then makes any necessary changes based on the results (grade) for future study.

Differences from Previous Studies

This study on the effects of study skills training intervention on United States Air Force Aeromedical Medicine Apprentices represents a departure from previous studies involving the teaching of study skills to students because it involved military students in a military technical school setting. Previous studies by Smith and Dowdy (1989), Zimmerman and Pons (1986), Christen and Murphy (1985), and Valeri-Gold et al. (1997) have focused on high school or college student settings. Prather (1983) conducted a study at the U.S. Air Force Academy involving 24 students with low grade averages. These studies all assert, in one form or another, that study skills need to be taught to students to enhance their probability of success. Sterling (1996 unpublished dissertation) focused on test anxiety asserting that test anxiety was a factor that could be modified to enhance military student success. Sterling's study was conducted in a military technical school. The major differences between this study and previous studies are that it involved a military technical school setting, focused specifically on the effects of teaching study skills using random sampling (not targeted groups), and followed student progress for at least three months.

Treatment

The treatment in this experiment was originally developed by a board certified psychologist at Sheppard Air Force Base. The researcher modified the course based on the review of literature for this study, four years of experience as an instructor and two years experience as a course supervisor. The treatment (Study Skills Course) was based on the study skills model discussed earlier and emphasized five major areas:

1. Note Taking
2. Remembering

3. Organizing Study Time
4. Minimizing Stress
5. Test Taking Strategies

The class was taught in a 90-minute session prior to the start of the Aeromedical Apprentice course. Additionally, a one-hour follow up session was given to students one month after they began technical training in the Aeromedical Apprentice course. It was intended to put the students in the correct frame of mind to approach their studies in an effective fashion. The class was interactive as the students were encouraged to participate and express their opinions.

The content of the study skills course offered as the treatment in this study is well founded in the literature and previously identified in the discussion of the Study Skills Model.

Research Design

This experiment used the post test only control group design (Campbell & Stanley, 1963; Yount, 1990). This design used a treatment group and a control group. The treatment group received study skills training and was measured on four dependent variables. The control group was measured on the same four dependent variables, but received no treatment (study skills training).

The experimental control used in this study was random assignment (Hinkle, Wiersma & Jurs, 1994; Kirk, 1995; and Kerlinger,1986) and the use of the disguised experiment technique (Kirk, 1995). Subjects were randomly assigned to two groups, the treatment and control group allowing the researcher to consider the treatment and control group statistically equal. In effect then, the design of this experiment is expressed as follows (Campbell & Stanley, 1963; Yount, 1990)

Treatment Group	R	X	O_1
Control Group	R		O_2

The statistical analysis used in this experiment was regression analysis. The aptitude of all students in this experiment had already been measured by the Armed Services Vocational Aptitude Battery Test General Score which was used as a covariate in the experiment. Use of the covariate reduced the amount of unknown error making this design even more powerful (Yount, 1990). The directional hypotheses were tested using regression analysis at the $p < 0.05$ level.

Statistic

All of the hypotheses were tested using regression analysis comparing results obtained from comparing the full model to the restricted model for each hypothesis. The Full Model used was; Y (The dependent variable) = X_1 (Student ASVAB Score) + X_2 (As indicated by a 0 for the control group or 1 as the treatment group to show group membership) + error. The Restricted Model used was; Y (The dependent variable) = X_1 (Student ASVAB Score) + error. The difference between the Full and Restricted Models was represented in an F ratio which indicated significance or non significance. This procedure was used for each hypothesis tested in this study, (Hinkle, 1994).

Ethical Standards

Informed consent was obtained from the University of North Texas human subjects review board. Written approval was obtained from the Commander, School of Aerospace Medicine, Brooks Air Force Base Texas where the study was conducted. This report was made available to the School of Aerospace Medicine and the United States Air Force to further knowledge regarding the effects of study skills training. The study was designed to be as unobtrusive as possible with its only possible impact being improvement of student performance and improved methods for student retention.

Independent Variables

The main independent variable was a study skills intervention consisting of a 90-minute study skills course and a one hour follow-up session four weeks after the start of technical training.

The second independent variable used in this study was student ASVAB General test scores. These scores were designed to show student aptitude. The main purpose for using ASVAB General test scores in this study was to show that the treatment and control groups were similar and to reduce the amount of unknown error making the design even more powerful (Yount, 1990).

Dependent Variables

Maring, Shea and Warner (1987) argued that evaluating a study skills program on the basis of a single variable, such as grade point average, is inappropriate. Therefore, four dependent variables were chosen for this experiment. These variables were: number of academic interventions for individualized instruction, end-of-course test scores, time spent in one-on-one instruction for student individual assistance, and graduation rates. The dependent variables involving extra time devoted to students who needed help beyond normal course time, (number of academic interventions for individualized instruction and time spent in one-on-one instruction for student individual assistance) were reported to the researcher through weekly updates during the experiment. End-of-course scores and graduation rates were reported upon course completion.

Results

This study examined a random sample of 90 U.S. Air Force Aeromedical Apprentice students, (representing a population of approximately 250 students). The sample included Air Force and Air Reserve Component students who were new to the Air Force as well as senior non-commissioned officers with over 15 years of prior military experience. Subjects were randomly assigned into the control and treatment groups of 45 students each and observed for a three-month period.

A detailed analysis using independent samples t-tests was conducted to ensure the control and treatment groups were not different in any statistically significant way at the $p < 0.05$ level. Additionally, the fact that the groups were randomly selected suggests that the control and treatment groups were similar at the beginning of the experiment.

The study skills course was given to the treatment group on the first day of training, (90 minute orientation) followed by a 60 minute session one month later. The study skills course was not given to the control group.

Four null hypotheses were formulated to determine the effectiveness of the study skills course. Each hypothesis was tested by comparing full versus restricted regression models. The differences between the r^2 values of the full and restricted models were then computed to determine statistical significance at the $p < 0.05$ level. These results are shown on the table below;

Table 1

Statistical Results of Full Vs. Restricted Models, Critical Values and Significance Levels

	F Value (Full Vs. Restricted Models)	Critical Value	Sig*.
Ho_1	5.18	3.951	0.025*
Ho_2	5.454	3.951	0.022*
Ho_3	5.048	3.951	0.027*
Ho_4	1.367	3.951	0.246

Hypotheses 1, 2 and 3 were rejected, signifying a statistically significant correlation at the $p<0.05$ level between study skills training and dependent variables of; amount of times additional instruction was required, (negative correlation), end of course grade average, (positive correlation) and additional time required for one-on-one

instruction for student tutoring beyond normal class room instruction, (negative correlation). Hypothesis 4 was retained at the $p<0.05$ level.

Conclusions

Based on the findings of the study, the following conclusions were reached:

1. A statistically significant negative correlation existed between the independent variable of study skills training and the dependent variable of the number of times students required additional assistance outside of normal classroom instruction. Students who were trained in study skills required additional assistance on fewer occasions than students who were not trained in study skills.
2. A statistically significant positive correlation existed between the independent variable of study skills training and the dependent variable of end-of-course grade average. Students who were trained in study skills had higher end of course grade averages than students who were not trained in study skills.
3. A statistically significant negative correlation existed between the independent variable of study skills training and the dependent variable of the amount of time spent in one-on-one instruction for student individual assistance outside of normal class time. Students who were trained in study skills required less time spent in one-on-one instruction for student individual assistance outside of normal class time than students who were not trained in study skills.
4. Although the student attrition-rate was 50% lower in the treatment group, (3) than the control group, (6), the difference was not statistically significant at the $p<0.05$ level. In this particular study, students who were trained in study skills were more likely to graduate than students who were not trained in study skills.
5. The ASVAB General score was a statistically significant predictor of all of the dependent variables used in this study.
6. The Study Skills Model presented earlier is an effective tool to use when developing and delivering a study skills course.
7. Findings of this study were consistent with earlier works of Zimmerman and Ponds, (1986); Kirschembaum and Perri (1982); Entwisle (1960) and Prather (1983). These works indicated that study skills training can yield statistically significant positive results. This is especially true with study skills interventions that include multi-component instruction which involves such components as note taking, reading, test taking strategies, organization of study time, etc. and if the study skills instruction is reinforced over time.
8. The implementation of the study skills course used in this experiment appears to be a very effective use of time and resources. The amount of time and resources expended in providing additional instruction to poor performing students and/or the cost incurred when a student fails a course dictates the use of preventative methods such as the study skills course used in this experiment. The cost of training each Aeromedical Apprentice student was over $12,500.
9. Air Force health care technical schools should encourage the teaching and use of effective study skills techniques to their students that reduce remedial instruction and increase end of course scores and graduation rates. Continued efforts in the area of study skills training will lead to a reduction in costs for the Air Force and savings for U.S. taxpayers.

Recommendations for Further Study

1. The results of this study suggest a possible relationship between study skills training and graduation rates which should be further explored.
2. The results of this study suggest applicability of study skills intervention to other fields of technical training. The study skills intervention course in this experiment could provide a basis for further studies implementing study skills interventions in military and civilian medical and non medical training settings.
3. Further studies regarding age and education level should be conducted prior to implementing a study skills intervention course in adult non-technical training environments.
4. Further research should be conducted in primary and secondary school settings to determine the feasibility of providing sustained cost effective study skills training to students early in their academic careers to enhance their learning capabilities.
5. Further studies should be conducted to identify the minimum number of study skills training sessions required for effective adaptation of study skills as evidenced by little or no remedial training and high graduation rates.

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6. Further research should be conducted to determine the projected cost savings of implementing a study skills intervention course throughout U.S. Air Force medical and non medical technical training schools. This analysis could then be applied to the other three branches of the military if cost savings prove significant.
7. Further research should be conducted to reexamine that ASVAB (Aptitude Test) score threshold used to assign Air Force recruits as Aeromedical Apprentice Technicians.

Air Force Implementation

The U. S. Air Force School of Aerospace Medicine has incorporated the study skills course described in this article into all five enlisted courses taught at the school in September, 1998. Additionally, the author has put forth an official Air Force suggestion regarding the implementation of the study skills course for all Air Force initial technical training courses in an effort to offer this training to over 25,000 students per year.

If more students succeed in technical training courses, the Air Force will save money in recruiting and training costs amounting to millions of dollars per year. The current Air Force technical school failure rate is approximately eight percent. The Air Force can save an estimated 1 to 2 million dollars, (in training costs alone) for each percentage point reduction in the failure rate.

Contribution to Human Resources Development

We currently live in an environment where people will be expected to learn more skills and even change careers at an unprecedented rate. U.S. Air Force technical training mirrors many corporate training programs and in fact, sets an example for training a diverse workforce to perform a complex mission. Study skills training, which costs little in resources and time, can help ensure that technical corporate training programs are successful. We can not assume that the workforce knows how to study, or even learn. Many people have not effectively honed these skills. The cost to corporate America due to ineffectiveness is incomprehensible. We need to ensure the workforce has mastered the skills of learning to allow them to adapt to an ever changing environment so that corporate America can succeed in the brave new world of global competitiveness.

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Helping Employees Develop Computer Skills While at Work: An Exploratory Study

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This paper reports findings from a study of how employees develop computer skills at work. Interview data from a cross section of employees working at an international insurance company described what promoted learning from the employees' perspectives. The interview themes were translated into strategies for enhancing the learning of computer skills in classroom and daily work settings. This study applied the deliberate practice framework (Ericsson & Lehmann, 1996) to the development of computer skills.

Keywords: Computer Skills Development, Learning Strategies

In an era when businesses are increasing their use of information technologies, Human Resource Development (HRD) personnel are faced with the problem of helping employees develop computer skills. Many employees need computer skills to gain employment (Dugger, 1997), and must keep their skills current to maintain their jobs (Cahoon, 1996).

A common approach to solving this problem is to offer classroom training (Watkins, 1995), which may not be the most effective strategy for helping employees develop computer skills (Gattiker, 1992). In work settings, new training needs evolve quickly, creating a time lag between the need to learn new skills and the scheduling of classes. Furthermore, research in the area of adult learning indicates that classroom training results in marginally useful outcomes especially when the design of daily work environments does not promote learning (Broad & Newstrom, 1992).

Structuring the work environment to promote learning and to increase overall productivity via technology is one of the major challenges faced by Human Resource Development personnel (Rhinesmith, 1994). New theoretical models are needed that (a) identify when formal classroom training is helpful and (b) account for the ways in which employees learn informally in daily work settings. Theoretical models could then be used to help guide the design of workplace learning initiatives. This study addressed the problem: How can HRD personnel best help employees develop computer skills?

Theoretical Rationale

This section describes the theoretical rationale that guided the design and conduct of this study. Research reviews in the area of computer education identified prior experience as the only variable that consistently demonstrated a noteworthy relationship with the development of computer skills (e.g., Mauer, 1994). In many studies, experience was defined in terms of quantity (e.g., number of hours or classes) which did little to inform practice other than to suggest that more time on the computer leads to improved performance.

Ericsson and Lehmann (1996) disagreed with the conclusion that that skill development is a function of an individual's amount of overall experience. They argued that skill development occurs as the result of engagement in a specific type of experience referred to as deliberate practice. According to Ericsson, Krampe, and Tesch-Romer (1993), "deliberate practice is a highly structured activity, the explicit goal of which is to improve performance. Specific tasks are invented to overcome weaknesses, and performance is carefully monitored to provide cues for ways to improve it further" (p. 368).

The deliberate practice framework describes four general conditions that may contribute to skill development: (1) the learner's willingness to engage in (2) structured learning experiences, (3) guided practice, and (4) independent practice activities. The experts' learning process began with initial interest that was sustained for a long period of time, with encouragement and support from parents or teachers. The learners' motivations to become experts led them to engage in structured learning experiences. Coaches or trainers designed structured learning experiences to (a) improve specific aspects of performance through repetition and successive refinement, and to (b) teach all the relevant knowledge and skills in a discipline. The coach also guided the learners initial practice activities and provided immediate feedback. The learners also completed practice activities independently, which required a high level of concentration and focus.

When experts engaged in structured learning experiences and guided practice that was supplemented by

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independent practice activities, skills developed that set the stage for continued learning and that led to the development of expertise over time (Figure 1). While the general description of this learning process emerged from the analyses of experts' diaries and other autobiographical material, the process may shed some light on how non-experts could improve their skills.

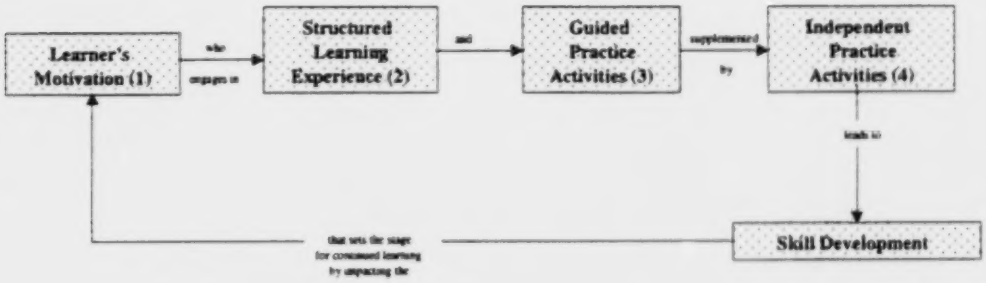

Figure 1. The conditions believed to contribute to the development of expertise: The Deliberate Practice Framework (based on Ericsson & Lehmann, 1996).

Research on the deliberate practice framework was extended to the development of computer skills, but only to the domain of computer programming with highly experienced computing professionals as subjects (see Koubek & Salvendy, 1991; Pirolli & Recker, 1994). This stream of research investigated the cognitive processes associated with expertise (i.e., how experts retrieve, organize, and evaluate information) rather than the usefulness of the deliberate practice framework to promote skill development by discretionary users.

In summary, Ericsson and Lehmann's (1996) work on deliberate practice highlighted the importance of experience to the skill development process and described the general conditions believed to contribute to performance improvement. Although the intent of the research on the development of expertise was to draw conclusions about general human behavior, Ericsson and Hastie (1994) concluded that researchers are "remarkably ignorant" about how people acquire skills in everyday situations (p. 65).

This study extended the focus of prior research by studying adults developing their skills in daily work environments. If computer skills are built day-by-day over time, then the major variables that influence the skill development process may be found in the learners' daily work environment. If experience is an essential component of the process through which experts develop skills, then the deliberate practice framework might be useful for identifying some of the variables, or aspects of an experience, that facilitate the development of computer skills in non-experts. Other variables may also underline the effectiveness of work-related learning experiences.

Methodology

Two questions focused the collection and analysis of data in this study: (1) What aspects of an experience do employees report as promoting or inhibiting the development of computer skills while learning in a *formal, classroom setting*? (2) What aspects of an experience do employees report as promoting or inhibiting the development of computer skills while learning *informally on the job*?

Responses to these questions were collected using an hour-long interview conducted by the researcher. The interview used a semi-structured format that allowed the comparison of answers among employees, but did not restrict the responses to a predetermined set of variables (Bernard, 1994). The data collection began with the employees describing the computer skills required to complete daily job tasks. These skills were limited to (a) skills required to operate a personal computer and (b) skills required to use application software (e.g., Microsoft Office programs). Then the employees sorted cards that listed computer skills into two piles: (1) skills the employee had learned or (2) skills the employee had not yet learned. The employees sorted the cards a second time into (1) skills

for which classroom learning was most influential and (2) skills for which formal learning was most influential. The interview continued with the employee describing how specific skills were learned. The tape-recorded interviews continued until new data was not offered ($n = 20$).

The interviews were conducted at an international insurance company that was selected because insurance was the major industry in the region and the work environment was characterized by ongoing technological change and high productivity demands. Employees were selected to represent the maximum variation (Patton, 1990) of ages, gender, work experience, and technological expertise found within the department of sixty employees. The sample in this study consisted of a diverse group of employees with respect to age (26-59 years, $M_{age} = 44$), educational level (11-18 years, $M_{years} = 14$, associates degree), and experience learning to use computers (25% beginners, 50% intermediate, and 25% advanced users). All of the employees used the computer to do part of their jobs. Half of the employees had no formal computer training outside the company. All employees had attended at least one company sponsored computer training. While the background characteristics of the sample were diverse, their perceptions of learning outcomes and the learning process were relatively uniform.

The data analysis began when the researcher transcribed the interviews directly into Ethnograph Version 4.0 (Seidel, Friese, & Leonard, 1995), a software program designed for text-based data. The computer program facilitated the researcher's efforts to reduce the information into a series of variables that could then be examined for relationships (Weber, 1990). The approach to content analysis used in this study consisted of eight-steps (Chi, 1997). (1) The researcher read the interview transcripts and created a codebook. (2) The researcher coded segments of text that identified variables that represented employee perceptions of what promoted or hindered their learning. (3) The data were summarized into a hierarchy of themes-by-setting. (4) The researcher then sorted the major themes using the conditions of the deliberate practice framework (e.g., structured learning experience, guided practice, etc.). (5) The researcher re-coded the data a second time. (6) The hierarchy of themes was revised as necessary. (7) The top two levels of the hierarchy were used to answer the research questions and to generate frequencies.

To strengthen the accuracy and objectivity of the data, a second qualitative researcher not associated with the study reviewed the data collection and analysis strategies. The researcher had each employee review and comment on his or her own transcripts as well as a preliminary report of the study findings. The researcher also engaged in peer debriefing at regular intervals during the data analysis process. A limitation of the study was that the findings were derived from the employees' perspectives and were not confirmed through the collection of additional data sources.

Results

An analysis of the interview data revealed three key findings. First, employees reported having learned a wide range of computer skills in both the classroom and daily work setting. Of the 41 skills covered in the interviews, employees reported having learned all of the skills on the job (100%) and 39 of the skills in a classroom setting (95%). The skills ranged from basic skills required to operate a personal computer to skills required to complete job tasks using Microsoft Office application software (e.g., Access, Excel, PowerPoint, Word). In other words, all but two skills were reported having been learned by an employee in either setting. Because the employees reported having learned the same computer skills in both classroom and daily work settings, the researcher concluded that the learning of computer skills was not limited to a classroom setting. This conclusion was supported in the interview data. For example, one employee remarked, "I liked learning in either setting" Another employee remarked, "The classroom training was enough to get me started and then my skills were strengthened over time because I did it on the job."

Second, employees reported that the place of learning (e.g., classroom or work setting) was not as important as the instructional process (e.g., having access to a computer coach). The analysis of the interview transcripts identified eight themes that described employee perceptions as promoting learning in both the classroom and daily work setting. In other words, the same things promoted learning in either setting. The summary provided by Table 1 begins with a column titled "Instructional Process" that lists the integrated theme or activity that functioned across settings. The frequency indicates the number of employees who mentioned the theme at least once. The second and third columns summarize the subthemes by setting.

Third, the themes identified in Table 1 provided a more detailed description of the deliberate practice framework. The following paragraphs discuss the themes highlighted in Table 1 and their relationship to deliberate practice.

Table 1

Employee (n = 20) Perceptions of What Promoted the Development of Computer Skills Across Settings

Instructional Process Major Theme (%, Frequency)	Classroom Setting Sub-themes	Daily Work Setting Sub-themes
1. Reflective Dialogue (95%, 19) *Lea became engaged in the learning process whe initiated a conversation with so knowledgeable about computers.*	(+) Talked with instructor (+) Helped by other learners (+) Had all questions answered (+) Completed hands-on act accompanied by discussion	(+) Learner initiated dialogue (+) Dialogue focused on lea questions (+) Used clear language, not jarge
2. Independent Practice (95%, 19) *Learner the new skill frequently and experimented.*	(-) Limited practice in class (-) No opportunity to practice class	(+) "Use it or lose it" (+) Opportunity to experiment (+) Job tasks viewed as p activities
3. Direct Experience (85%, *Learners developed computer skills through hands-on experience as opposed to p listening.*	(+) Each person had a computer (+) Hands-on applications	(+) Learn-by-doing (+) Lots of hands-on repetition
4. Guided Practice (85%, *During interactive sessions, the demonstrated a function, and then observe learner practice the new function until comfortable.*	(-) Limited opportunity to apply skill after class with help (-) No access to someone who answer ongoing questions	(+) Someone watched me (+) I watched then s/he watched me (+) Someone observed & pr feedback
5. Helpful Feedback (80%, *Ideal feedback was immediate and was mor showing someone the steps of a function.*	(+) Determined what went wrong	(+) Immediate (+) Identified why I did not understand (+) Answered my repetitive questions (+) Explained why and how
6. Trusting Relationship (75%, *Learning occurred in the context of a t relationship.*	(-) Mixed group composition (-) Large group size (-) Unhelpful trainers	(-) Not helpful coworkers who impatient and answers incomplete (+) Helpful coworkers were pat willing to answer questions
7. Time to Focus on Learning (75%, 15)	(+) Time to learn (+) Focused on learning (+) Few distractions	(-) No time to learn (-) Distractions (-) Conflicting priorities
8. Incremental Learning (60%, *Learners developed computer skills in the con a genuine problem (e.g., job task) and incremental manner that built on prior knowl*	(+) Made analogy to what is known (+) Related new skill to job tasks (+) Learned step-by-step (+) Built on steps over time	(+) Related to job task (+) Related to what is known (+) Built skills over time

Note. (+) Indicates theme perceived to facilitate learning, (-) indicates theme perceived to inhibit learning.

Structured Learning Experiences

The results from this study confirmed the importance of structured learning activities to the skill development process. The employee descriptions not only confirmed the usefulness of structured learning experiences but also described three helpful aspects of these experiences: (a) reflective dialogue, (b) direct experience, and (c) incremental instruction.

Employees (95%, 19) perceived structured learning experiences as helpful when they included reflective dialogue. Learning dialogues differed from regular conversation because they were (a) initiated by the learner, (b) centered on the learner's questions, (c) continued until all the learner's questions were answered, (d) used clear language as opposed to computer jargon, and (e) were accompanied by direct experience. Employees (85%, 17) described direct experience as the immediate, hands-on use of the computer as opposed to learning by passively listening and watching someone else demonstrate how to use a skill to perform a task.

Employees (60%, 12) preferred to learn new skills incrementally. Incremental instruction referred to the employees' preferences for learning a new skill (a) step-by-step, (b) in relation to skills already learned, and (c) in small increments over time. A representative statement was, "I like to learn one part first. And, if there are a lot of different ways to do something, I want to get the first way down pat. Then go on to the next one. That is how I like to learn. I don't want to be taught a million things at once. If I am already familiar with it, then I could learn more. I like to learn one thing at a time."

The interview data did not describe traditional, didactic, lecture-based approach to instruction in a large classroom setting. Instead, the employees described smaller, less formal learning sessions characterized by hands-on activity and conversation. These findings suggest that the formal learning experiences (e.g., classroom training or one-on-one coaching) are helpful especially when (a) smaller in size, (b) scheduled as multiple sessions that build on each other, and (c) focus on content learned in a conversational and experiential manner.

Guided Practice

According to the deliberate practice framework, two types of practice activities enhance skill development: (a) with a coach and (b) alone. The employees in the current study also identified these two types of practice activities as promoting the development of computer skills. The study extended the deliberate practice framework by (a) addressing the development of computer skills in organizations and by (b) identifying the characteristics of effective computer coaches.

Employees (85%, 17) identified the guidance provided by another person knowledgeable about computers as essential to the development of computer skills in both the classroom and daily work setting. For example, employees identified trainers or other class participants as coaches in the classroom setting and identified coworkers as coaches on the job. A representative statement was, "I sat at the computer and watched and then she moved over and I took over. She sat with me and watched me for a while to make sure I understood." Employees identified coworkers as informal coaches more often than designated trainers or supervisors. Coaching took place (a) during, (b) in lieu of, or (c) as a follow-up to structured learning experiences.

The study also provided information on the characteristics of effective computer coaches. Coaches promoted or inhibited learning through their feedback. Employees described effective feedback (86%, 16) as immediate and as more than explaining how to perform a skill (e.g., "Do this, then this, then this..."). The ideal nature of feedback was that which: (a) identified why the learner didn't understand something, (b) explained "why a skill worked" in addition to "how to do it", and (c) provided answers to all questions, especially repetitive ones.

The definition of useful feedback had implications for informal coaches who answered technology-related questions. According to one manager, time pressures led employees to answer questions quickly (e.g., how to "get it done") and there were performance consequences when employees are only taught the specific buttons to press rather than the concept or software structure. One consequence was that employees were ill equipped to handle novel situations. The manager discussed the limitations of merely showing someone how to do something without explaining why, "...they don't have to see connections or opportunities to resolve a problem...for example, people who have automatic cars tend to only use them in drive or park. But when the condition changes (for example, rain, severe grades, and snow), they never use any of the additional tools available to them. No one has ever explained to them what the gears are for (for example, a lower gear gives you more traction in wet conditions). If you took training one-step further, they would have more command of the automobile in all situations."

Employees (75%, 15) also preferred to learn new skills from someone perceived as patient, helpful, and respectful. The person was either a trainer or coworker. People were not viewed as helpful when they acted irritated, frustrated, rushed or used computer jargon. This finding has implications for trainers as well as employees who wish to be effective computer coaches. In this study, the resident computer expert was selected as the designated "computer coach." Also of interest was the tendency for the management in this organization to request the resident computer coach to complete special projects that left her little time to help coworkers.

Independent Practice

Ericsson wrote that there is an inherent conflict between working and learning. The potential conflict becomes apparent in the employee descriptions of independent practice. Employees (95%, n = 19) also perceived frequent opportunities to practice using a new skill independently as helping to facilitate learning; however, all but one employee mentioned that more time to was needed to practice and experiment with new skills. Lack of time for independent practice resulted in employees using less efficient skills to complete work tasks or staying with "the old way of doing things." A representative statement from an employee who attended a word processing class was, "Just recently I was going to use the word-processor to type a fax coversheet rather than hand-write one. I tried to figure out how to do it and I finally gave up. I ran out of time and I decided to just do it by hand. I didn't have time to ask anyone." Independent practice was supported when (a) employees requested and received help, (b) job tasks were designed to reinforce formal training, and (c) and when employees see the direct application of a new skill to the performance of a work task.

The Learner

The initial description of the deliberate practice framework included the learner's motivation level as influencing the learning process. Although motivation was not the focus of this study, interview segments included reasons that the employees gave for learning to use computers. The five reasons mentioned most often were that the employees: (1) needed to learn to solve a problem, (2) wanted to learn because of an immediate benefit (e.g., save time), (3) were forced to learn to maintain employment, (4) enjoyed learning for learning's sake, and (5) were motivated to learn by a possible reward. The reason mentioned most, learned to solve a problem, suggests that coaches identify problems the learner wishes to solve and then present new material in the context of these problems, using exercises that mirror daily work activities as to practice the skill.

In summary, the employees' descriptions validated the deliberate practice framework as a model for describing how adults learn computer skills while at work. The framework places formal training as part of a larger group of learning activities. The data allowed for a more detailed description of how adults learn computer skills at work than provided by the initial deliberate practice framework.

The deliberate practice framework (Ericsson & Lehmann, 1996) was useful for organizing the eight themes and their subthemes. The framework identified how the themes work together to describe a possible model of how employees develop computer skills while at work.

Implications for HRD

Human Resource Development personnel could help employees develop computer skills by incorporating employee perceptions of what does or does not work into the design of learning initiatives. The deliberate practice framework, as described in this study, translated into specific questions that could guide the design of a learning initiative. The first column in Table 2 lists the questions associated with each condition of the deliberate practice framework. The second column lists a specific recommendation suggested by the employees in this study to promote the development of computer skills in their company.

The questions listed in the first column of Table 2 raise two issues. First, are structured learning activities, both formally in the classroom and informally at the learner's desk, designed with the learner's input and offered frequently enough to provide incremental learning? Second, who will serve as computer coaches (e.g., trainers, coworkers, and supervisors) and how do we ensure that they are skillful and effective in their efforts to promote skill development? The second column lists specific strategies for promoting deliberate practice. These include revising job descriptions, performance appraisals, and reward systems to reflect the teaching and learning of technology.

Conclusion

This study places traditional, classroom-based training in the broader framework of deliberate practice, and suggests that formal training be offered in concert with other deliberate practice activities embedded in the daily work setting (e.g., guided practice, independent practice). The theoretical significance of this study was that it extended the framework of deliberate practice to developing computer skills in work settings. The practical significance was that it offered suggestions that HRD personnel could use to improve the development of computer skills in both classroom and daily work settings. Future research could investigate: (a) the validity of the model, (b) the impact of

the process outlined in the model on increasing productivity and the efficient use of technology, and (c) the utility of the model in explaining the development of computer skills across different populations.

Table 2

Designing Classroom and Daily Work Settings to Promote the Development of Computer Skills

Question ✓	Possible Application
Learners	
❑ Are employees in the planning process?	Include employees and managers on committees that determine organizational goals regarding technology and that design/plan educational efforts.
❑ Are learners rewarded for developing computer skills?	Continue to support learning beyond an employee's initial orientation to a job by making learning and teaching part of the employee's daily job responsibilities.
❑ Are employees rewarded for teaching coworkers new skills?	Revise performance evaluations to reward employees for developing new skills that result in more efficient use of technology and for teaching other employees to use those skills.
❑ Do employees see new learning as connected to goals that are personally relevant?	Provide a regular forum for employees to communicate discoveries or suggestions about business applications of PC software that improve productivity.
❑ Do employees have time to learn?	Give employees time to practice new skills (e.g., include learning time when determining production quotas).
Structured Learning Experiences	
❑ Are regular training sessions scheduled both formally in classroom settings and informally at the learner's desk?	Define performance competencies with regard to computer skills. Develop goals and a plan for achieving them that incorporates the principles embedded in the deliberate practice framework.
❑ Are training sessions learner-directed, conversational in nature, and primarily hands-on?	Have trainers, employees, and managers collaborate around the design of regularly scheduled training activities and the design of follow-up practice activities.
❑ Are trainers/coaches skilled in incremental instruction?	Retrain external and internal instructors along with employees in experience-based, developmental teaching techniques.
Guided Practice	
❑ Are coaches skilled in providing informative feedback?	Formalize informal learning networks by updating regularly a list of "who knows what" and who are effective coaches.
❑ Are systems in place so employees have access to immediate feedback?	Provide guidelines and suggestions for effective coaching behaviors and techniques.
	Reward groups as well as individuals (e.g., provide compensation systems that reward performance that includes quality, innovation, and teamwork).
Independent Practice	
❑ Are job tasks assigned so that they (a) build on new skills being learned in structured training sessions and (b) provide opportunities to practice and experiment with new skills?	Reward risk taking and view mistakes as opportunities to learn instead of taking disciplinary actions and marking down job reviews.

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Defining Core Problems for on the Job Training: An Example in the Car Repair Trade

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The aim of this paper is to highlight the importance of the inclusion of core problems in training courses and the presentation of an instrument to describe core problems systematically. Based upon 30 interviews, the core problems of three occupations: service manager, diagnostic mechanic and receptionist working in garages are systematically described.

Keywords: Core Problems, Training, Car Repair Trade

Changes in technology, organizational renewal, optimization of the quality of production and orientation to changing consumer demands require higher standards of skills and flexibility in the work force (Penn, Rose, & Rubery, 1994). In order to meet these standards, it is necessary to deliver more training to the work force and define training in terms of investment rather than costs (Mirvis, 1993). Training of employees can be regarded as a major challange for human resources development. Because of all the changes in the labour system, many simple routinised tasks are automated and complex tasks, where only adaptive human intelligence can make the evaluations and the decisions needed, remain (Resnick & Wirt, 1996). Employees nowedays need to be able to function in an uncertain environment, to handle symbols, to communicate with difficult clients, to work in groups, to learn, to take decisions on their own and to communicate with collegues from different fields (Zuboff, 1988; Appelbaum, & Batt, 1994; Thompson, & Warhurst, 1998). Therefore the aim of training should be broadly trained employees that react flexibly and effectively to changes in their work, organization or career (Van Zolingen, 1995; Nijhof, & Streumer, 1998). This implies a revision of the content of training. A new outlook upon training of the future is to learn employees to handle the core problems of their occupation (Onstenk, 1997a, b, c). Core problems are problems and dilemmas that are central to the practice of an occupation (Laur-Ernst, 1984; Onstenk et al 1990). A first step in this process is to develop an instrument to define and describe core problems for occupations. This paper describes this process for service managers, receptionists and mechanics working in a garage.

Core Problems

Core problems are problems and dilemmas that are central to the practice of an occupation. These are problems with which an employee regularly comes into contact, which are characteristic of that occupation and for which the employee is expected to have a solution for tackling them. They involve considerations and choices relating to dilemmas, where the application of knowledge and skills and the use of the appropriate register of actions will determine whether someone is a more or a less professional worker. Core problems involve characteristic, central occupational situations in which 1) complex problems have to be solved and 2) the specificity of the situation, as well as 3) its social context, play an important role.

In recent publications Onstenk (1997a, b, c) relates core problems to the context of the work organisation as a whole. He distinguishes core problems that relate to 1) the production process, 2) the organisation and 3) the socio-communicative context:

Production problems relate to the object of the work activity (the material and the product), to the instruments and technology employed, and the extent to which the organisation of the work allows for regulatory problems. These are problems that may occur at the time of preparing, performing, supporting or checking tasks in the primary process.

Control and regulatory problems relate in particular to working in a company as a hierarchical organisation where there is a division of labour. These are problems that result from the way in which the production process is organised (think of regulatory tasks; division of tasks; fitting into the organisation; dependence on others; coordination and harmonisation).

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Socio-cultural problems stem from working in the occupational and industrial sector. These are problems that occur when working together with colleagues, in a particular occupational or corporate culture and theories and opinions existing within the occupational category or company that relate to that occupation.

Onstenk emphasises that these problems areas overlap and are interrelated.

Onstenk defines the relationship between core problems and occupations as follows: 'one or more sets of specific production problems, forms of organisation, and socio-cultural context and problems are characteristic of a particular occupation. These characteristic sets can be designated the core problems of an occupation (1997a). In principle, core problems can be defined for every occupation. The 'core' of the occupation can be summarised and structured on the basis of core problems; this definition is, however, not exhaustive. According to Onstenk, an analysis of specific sets of tasks that have to be performed is also needed. He defines occupational competence as a set of routines (knowledge and skills) with which tasks can be performed, the ability to solve problems, to anticipate unexpected situations and to decide when which route is most appropriate, or must be optimised and changed .

Onstenk places the emphasis on three aspects of core problems: These relate to complex problems that are of primary importance in the practice of an occupation. They must be tackled in concrete occupational situations and they are viewed from the standpoint of the employee who has to act in that situation. Core problems are characterised by uncertainty and the weighing up of conflicting considerations and interests in complex situations. In these complex situations, one cannot resort to routine actions, and choices have to be constantly made anew.

Core problems embody the context of an occupation. What is attractive in core problems is that many qualifications have to be deployed for solving core problems. Or, as Onstenk (1997a) expressed it so well: 'core problems emphasise a holistic approach to the occupation.' Moreover, core problems provide the opportunity to contextualise an occupation. Onstenk says: 'The term core problem is intended to be an integrated concept, where the context in which the employee works forms an essential part of the occupation.... Core problems define characteristic, central occupational situations. They are in that sense interesting to education and training: the core of an occupation is demarcated, the content of the occupation is arranged and selected, the position of the employee as an individual who must take action is of central importance. Core problems should therefore contribute to determining the content of vocational education and training (1997a).

Using these insights as a basis, we want to study if it is possible and useful to formulate core problems, and the qualifications which an employee must possess in order to solve them, in a specific sector and within a number of selected occupations.

Research question

What are the core problems of service managers, receptionists and diagnostic mechanics in garages. And how can they systematically be described.

Method

On the research path to the core problems of the service manager, the diagnostic mechanic and the receptionist, we have gone through five phases: (1) choice of the sector, (2) literature search, (3) guidelines for conducting interviews, (4) conducting the interviews and (5) a validation process (Blokhuis & Van Zolingen, 1997).

Why was the car repair sector choosen? At the beginning of the 1980s developments in the car repair sector gained momentum. Rapid expansion of micro-electrical systems in car technology; modernisation of workshop technology, in particular, the introduction of computer-controlled measuring and testing equipment, the introduction of new forms of logistical and administrative automation, and changes in the sales market for cars, all had a great effect on the supply of work and the organisation of work in garages, and on the job content and qualifications required (Warmerdam, 1993). These developments continue to occur in rapid succession, and it is difficult to predict what qualifications car mechanics will need to have in future (Spöttl, 1995). An approach focussing on core problems would therefore appear very suitable for this sector.

Three occupations were studied: the diagnostic mechanic, the service manager and the receptionist. Apart from these qualifications, the job of receptionist was studied, because this job displays interesting contrasts with the other two jobs. First a literature search was conducted into trends in the repair sector, their consequences for jobs in garages, for the qualifications required, and for training in the car repair sector. Furthermore, a brief study was carried out in the area of core problems. Secondly for this study were a total of thirty interviews conducted in twenty

garages with service managers, receptionists, and car mechanics, among others. This study was actively supervised by INNOVAM (the central training facility in the car sector). General data were collected about the occupations and about these employees' work experience, education and training. The core problems of employees were mapped out by conducting a systematic inquiry into the principal tasks of the employees and, as a part of this, into the situations and moments when choices had to be made and decisions taken, where it was not possible to resort immediately to routine actions. Subsequently, questions were asked about the explicit combinations of knowledge and skills that were necessary to solve these core problems. Thirdly on the basis of these interviews, a number of trends and developments in the car repair sector were described. The principal tasks of the occupations of service manager, receptionist and diagnostic mechanic were described, several core problems of the employees (the dilemmas that play a significant role when carrying out their occupation), and the qualifications that the employees needed to solve these core problems. In the fourth place on the advice of INNOVAM, the core problems formulated were submitted for validation to a panel of two experts employed in the area of training in the car repair sector. The experts were requested to assess the recognisability and relevance of the core problems and the qualifications needed to handle them and, where necessary, to make suggestions for adjustments.

Results

Firstly, definitions are given of all three occupations, followed by the core problems with which the employees are confronted in their everyday work and, finally, the qualifications which they must have to solve these core problems. The core problems were characterised on the basis of two aspects: the area of tension in which they occur and the content of the problem. By 'area of tension' is meant the choice between opposites, such as, the choice between time and quality, or the choice between the interests of the customer and the interests of the garage. The description of the content of a core problem gives a concise reproduction of the concrete problem.

Service Manager : a General Definition The service manager bears final responsibility for the workshop of the garage. He is the contact between workshop, reception and after-sales (qualifications: broad technical know-how and experience, at least a diagnostic mechanic and, possibly, a technical specialist, good social skills and a good judge of character). The service manager is increasingly becoming a manager. A service manager must find it a challenge every day anew to please everyone, both the paying element (customer, employer) and the working element (car mechanics). In the process he will, ideally, try to strike a happy medium. This is a distinctly all-round occupation. The service manager is the kingpin in the garage. He is, for example, the person to speak to if a problem arises in the workshop or threatens to arise, or if something needs to be improved.

Frame 1 Principal Tasks of the Service Manager (a concise reproduction)

-To supervise the car mechanics in the workshop.
-To provide technical support to the car mechanics in the workshop.
-To allocate work to the car mechanics in the workshop and keep them busy, in close cooperation with the reception, the warehouse and the sales department.
-To motivate the car mechanics in the workshop.
-To create a good working atmosphere in the workshop, by ensuring that the car mechanics help or support each other, where necessary.
-To monitor and keep up the level of productivity of the workshop by having an overall picture of what is going on there: the workshop turnover, workshop hours and workshop costs, and by marketing promotion.
-To monitor the quality of the work turned out by the workshop, to convince the car mechanics of the importance of good quality and keep himself informed of customer satisfaction or dissatisfaction. Sales maxim:'The first car is sold by the salesman, but the second and subsequent ones are sold by the workshop.'
-To maintain the technical standard of the workshop.
-To act as instructor and make sufficient time free for this.
-If necessary, to step in as a diagnostic specialist in tracing and repairing complicated technical faults.
-To maintain good relations with customers. To assess customers correctly, to deal with customers openly and honestly: to reward customers when they are right and give the customer the benefit of the doubt, to show understanding for the customer's position, to give the customer a comprehensive explanation, if required, possibly to suggest or make a financial arrangement with a customer who cannot pay immediately; in short, to do as much as possible to retain the customer. A service manager remarked: 'You have to try to follow what a customer means at

this particular moment. His train of thought about a problem can vary from day to day. You have to help people decide whether to do something or not, by explaining and sometimes by offering an alternative. You do your best to help the customer drive the car as well and as cheaply as possible.'
-To maintain a good relationship with the shop manager.
-To maintain a good relationship with the other departments, such as the warehouse, the reception and sales.
-To supervise the workshop on environmental matters, to ensure that harmful substances are removed correctly.
-To formulate a personnel policy (engaging apprentices, job placement trainees and car mechanics).
-To deal with damage himself and/or pass it on to a specialist workshop.
-Possibly, to help with repairs himself (small garage) when it is very busy (medium-large garage).
-To deal with administrative work, to ensure that work orders are dealt with properly, also to supervise implementation and compliance with ISO standards if these are in operation in the garage (a couple of garages had just introduced them).

Frame 2: Core Problems of the Service Manager (a concise reproduction)

I Area(s) of tension: time
Content: A service manager may be faced with several different problems (technical and communicative) at the same time. He must be able to adopt a flexible attitude in this situation.

II Area(s) of tension: interests of the customer versus interests of the garage, time versus quality; money
Content: A service manager may be faced with a complicated fault. He must be able to deal with a complicated fault to the satisfaction of the customer and his garage.

III Area(s) of tension: quality versus money; short-term interests versus long-term interests
Content: A service manager may be faced with the purchase of new equipment and tools for the workshop. He must be able to strike the right balance between economy and quality when making these purchases.

IV Area(s) of tension: quality versus money; short-term interests versus long-term interests
Content: A service manager may be faced with a (imminent) shortage of know-how in the workshop. He must be able to ensure that know-how in the workshop remains up to the mark.

V Area(s) of tension: interests of the employees versus interests of the garage, own interests versus interests of employees; quality versus money; short-term interests versus long-term interests; organisation of work.
Content: A service manager may be faced with poor quality work and/or low productivity from the workshop. He must be able to supervise the car mechanics effectively, so that they work optimally, taking as the basic aims good quality work and high productivity.

VI Area(s) of tension: interests of the customer versus interests of the garage; own interests versus interests of the customer; short-term interests versus long-term interests; being creative in following the garage rules.
Content: A service manager may be faced with customers with complaints. He must be able to gain and retain the confidence of these customers.

Receptionist: a General Definition The receptionist maintains good contacts with customers and with the workshop and is able to make quick diagnoses. He advises the customer about maintenance and all other matters relating to the car. He makes a quick diagnosis of the faults reported by customers and translates these into work orders. In close consultation with the service manager, he sees to the car mechanics' work planning. As far as the content of his job is concerned, he has become a service adviser. He is also responsible for as high a return as possible from after-sales (service and spare parts). He is the representative of the garage to the outside world and sells services. In

addition, he must be able to calculate (cost estimation and subsequent costing, estimate hours and sales), and he is a manager of relationships (retaining, attracting and winning back customers).

Frame 3: Principal Tasks of a Receptionist (a concise reproduction)

-To make a quick diagnosis of a fault reported by a customer. To distinguish vague faults from simple ones. To clarify vague faults by asking further questions, possibly with the aid of a short questionnaire (diagnosis form) and/or by calling in the help of the service manager.
-To sell repairs, services, inspections, accessories.
-To make an estimate for a repair.
-To translate the customer's wishes into an assignment for the workshop.
-To see to substitute transport.
-To plan work, plan the workshop hours available per car mechanic and estimate the workshop hours expected to be needed for an assignment by a car mechanic.
-To allocate the work to the car mechanics (possibly in consultation with the service manager).
-To maintain contacts with the customer about extra costs of a service or a repair.
-To deliver cars to customers. To provide an explanation of the repairs, if requested.
-To register customers' complaints. To report faults which have not been repaired to the service manager.
-To invoice work orders. To do the administration of the work orders.
-To maintain contact with the after-sales team and the workshop manager.

Frame 4: Core Problems of the Receptionist (a concise reproduction)

I Area(s) of Tension: time versus quality; quality
Content: A rapid diagnosis must be made, based on the customer's complaint and this must be clearly worded on a work order.

I Area(s) of tension: interests of the customers versus interests of the garage, own interests versus interests of the customer.
Content: The receptionist also has to deal with difficult, angry and demanding customers. He must be able to deal with these customers in such a way that both the customers and the garage are satisfied.

Diagnostic Mechanic a general definition The diagnostic mechanicis able to apply technical know-how when making diagnoses, repairs and maintenance. In addition to broad technical know-how, he also possesses specialist technical know-how. He is well-informed about the latest developments in the use of electronics in cars. He is the person in the garage par excellence who makes the difficult diagnoses. He supports other car mechanics, possibly with his technical know-how, for example, in repairing faults, or as instructor.

Frame 5: Principal Tasks of a Diagnostic Mechanic (concise reproduction)

-To locate a fault and give a car mechanic the assignment of repairing the fault, possibly with the help of a repair plan.
-To give advice on repairs to other car mechanics.
-To pass on knowledge to other car mechanics. To supervise apprentices.
-To keep up and further extend his own knowledge by following courses,
-To ensure that the workshop equipment is up to standard,
-To help achieve an improvement in the quality of the work in the workshop,
-To behave in a customer-friendly manner when a customer comes to the workshop or when a test drive has to be made, in connection with a complicated fault.
-To carry out repairs,
Possibly help to work on:

-Delivery of new cars
-Delivery of used cars,
-Fitting accessories
-Finishing off services (when it is very busy).

Frame 6 Core Problems of the Diagnostic Mechanic (concise reproduction)

Area(s) of tension: quality; time versus quality
Content: A complicated fault occurs (unknown problem or a recurring problem). The diagnostic mechanic must be able to make a systematic search for the fault, to make a diagnosis and then to repair the fault himself, or to have a car mechanic repair it using a repair assignment.

Table 1
Areas of Tension of the Service Manager, Receptionist and the Diagnostic Mechanic

	Service manager	Receptionist	Diagnostic mechanic
time	x		
quality	x	x	x
time versus quality	x	x	x
money		x	
quality versus money	x		
interests of garage versus interests of customer	x	x	
own interests versus interests of garage	x	x	x
short-term interests versus long-term interests	x		
being creative versus following garage rules	x		

The core problems of the various employees within the car sector differ in degree of difficulty and in nature. As an employee in the car repair sector with a secondary school education develops in his career (from car mechanic, first car mechanic, diagnostic mechanic, receptionist to service manager) the core problems with which he is confronted in the first place become more complicated and he must possess a somewhat broader package of qualifications, which he must be able to apply in more complex situations, in order to be able to continue to perform well. In the second place, an employee who continues to grow will be faced with other core problems. A car mechanic must, for example, know exactly how he can best set to work on a major service. For him, solving core problems relates in particular to the fast and efficient performance of routine actions, repairing complicated faults that have been diagnosed by others, and making simple diagnoses. On the other hand, a diagnostic mechanic has to make diagnoses of faults in cars that are sometimes complicated. This calls particularly on his cognitive abilities for solving (technical) core problems. The receptionist has to deal with core problems of a technical nature, that are less complicated than those of the problems of a social nature. He has a great deal of contact with customers who are demanding and very critical and who all wish to be treated attentively. Furthermore, he sees to the planning of the work for the car mechanics in the workshop, in close cooperation with the service manager. Finally, a workshop manager is responsible for all the problems that occur in the workshop or are related to it. He solves these himself or in consultation with other people. The most charateristic core problem of the service manager is to be able to judge which problem to solve first. Being able to set priorities, and good time-management are, in addition to excellent social skills and technical insight, the essential qualifications which a good service manager must have.

Conclusion

From the study into the car repair sector it emerges that the formulation of core problems is possible and gives an insight into the complexity of the world of work. In addition, the core problems provide an insight into the various

combinations of knowledge and skills which an employee in the car repair sector must have in order to be able to work well in his occupation. Core problems shed light on the areas of tension in which an employee must be able to work in his occupation. Consequently, they provide the opportunity to 'contextualise' an occupation. We are of the opinion that these core problems which mirror the everyday world of work, should also be directional for training of employees in the future. In particular, the breadth and complexity of the employee's everyday reality are portrayed through these core problems more clearly than before. Core problems can serve as the basis for future on the job training by 'coaching and mentoring' employees to handle and reflect upon core problems, insofar as one can 'practise' core problems without jeopardising the production processes, and as long as there is good supervision in handling them. If the production process does not permit this, training courses in which 'artificial' core problems (simulation) are handeled and reflected upon can in the future provide opportunities.

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How Can Firms Improve Sales Performance?

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Do firms which inhabit different market share positions in their respective industries confront different sales training needs? It is the main argument of this paper that, regardless of the firm, sales training must overcome very similar problems. In other words, the challenges that generally motivate firms to engage in sales training are similar across firm type. This paper is based upon the results of focus groups conducted by AchieveGlobal in 1998.

Keywords: Sales Training, Business Strategy, Performance

Do firms which inhabit different market share positions in their respective industries confront different sales training needs? According to (Gutteridge, Liebowitz, and Shore, 1993 and Mann, 1990), many corporations generally recognize the importance of linking Human Resources Development (HRD) practice to business strategy. However, the distinct texture of the ways in which firms pursue the linkage between HRD practice and business strategy is largely a function of the market share position a firm inhabits in its industry (Raghuram, 1994). Miles and Snow (1978) have identified three general types of firms, according to market share position: defenders, analyzers, and prospectors. According to this classification scheme, defenders enjoy a relatively stable product market while prospectors, continually search for new products and markets. Analyzers, the authors argue, are firms that operate in two markets, those characterized by stability and those which are continually changing.

Because defenders operate in a relatively stable product market domain, these types of firms focus on increasing the efficiency of their production rather than on changing their structure, inputs, or operations. But because prospectors continually search for new markets and product opportunities, these types of firms tend to focus more on innovation in products and markets rather than on efficiency. Analyzers operate in two distinctly different product markets, one that is characterized by change, the other which is relatively stable. As expected, in the stable markets of operations, these firms tend to adopt the same foci as defenders, while in their more fluctuating markets, they adopt similar emphases to that of prospectors (Miles and Snow, 1978). Because the analyzer firms use a synthesis of these two types of HRD practices, I will not discuss them as a separate type from here on in.

These differences in business strategy imply differences in approaches to HRD practice. Raghuram (1994) argues that defenders pursue the following HRD practices: they emphasize functional expertise, place great stock on the development of internal talent and emphasize training that results in very specialized knowledge and process based quality improvements, particularly in the finance and production functions. According to Raghuram, prospectors tend to hire those who are already well trained, and then focus any training efforts on broad skills and on marketing, sales, and R&D functions.

In general then, the literature which links HRD practice to business strategy has tended the emphasize the fact that businesses which occupy different positions vis a vis their markets, will pursue distinctly different HRD practices. Given the logic that underpins this argument, we would expect that defenders, analyzers, and prospectors would confront very distinct challenges in the sales function. One would expect, for example, that defenders would have to defend market share, and thus, their sales challenges would center around how to retain existing clients. One would further expect that prospectors, on the other hand, would continually troll for clients. Their main sales challenge would be enticing new clients to contract with them. However, this distinction in the challenges faced by firms occupying different market share positions is not substantiated. Rather, it is the main argument of this paper that, regardless of the firm, sales training must overcome very similar problems. In other words, the challenges that generally motivate firms to engage in sales training are similar across firm type.

What we want to know therefore, is, what are the main challenges that firms will face in the next five years in their sales functions and furthermore, what are the appropriate training interventions that will help firms overcome these challenges. This paper reports on the results of focus groups that AchieveGlobal conducted at a major conference among human resource professionals to explore issues surrounding challenges for the sales function and for conducting sales training.

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Methodology

We conducted 2 focus groups with a total of 23 participants at a human resource conference in May 1998. The participants were selected from the conference list of attendees in such a way as to maximize the variety of industries represented. Focus group participants were either human resource professionals or high level managers who were responsible for developing training programs for some portion of their employee population, from a wide spectrum of industries including banking and finance, insurance, defense, retail, non-profit, pharmaceutical, telecommunications, and hospitals within the United States. The participants represented a variety of firm sizes and market share position. Ten of the 23 participants were employed at firms with more than 200 sales people in the organization. One of the participants represented a firm with less than 10 sales people, while another represented a firm that had between 100 and 200 sales people. A further two participants came from firms with between 10 and 49 sales people and a another two came from firms which employed between 50 and 99 sales people. Please note that because the sample size is small, the results should be viewed more as qualitative than quantitative in nature.

Research Questions

The purpose of conducting the focus groups was to determine what sales function issues organizations are currently facing and if they are different than those issues faced in the last few years. Some of the research questions we posed to focus group participants were the following:

- In the next 3-5 years, which of the listed items do you anticipate as the most important issue facing your sales function?
- What steps or actions does your organization plan to take, to address these challenges?
- In what ways are customers' expectations of sales people different than they were 5 to 10 years ago?
- One recent research study reports that 80% of an organization's sales are generated by 20% of the sales force. What are the skills and characteristics of these people, as compared with others sales folks in your organization?
- Of the above-mentioned skills, which are more critical for the future?

Results and Conclusions

The main finding of the focus groups is that, retaining customers and building their loyalty to a particular firm is largely a function of the degree to which the sales person can meet a customer's increased expectations and build a relationship of trust with that customer. In order for sales associates to retain their client base and to enhance that base over time, they will have to find ways to be efficient with the customer's time while providing the best service and building an enduring positive relationship with the customer. This observation was shared by participants across industries and regardless of the size or market share of the firm. Many participants indicated that their primary customer related challenge was to provide added value to the customer in the context of increased competition and a customer base which is increasingly pressed for time. In general, it was agreed that currently, customers do not have a lot of time to spend with sales people. Thus, in order for sales associates to retain their client base and enhance that base over time, they will have to find ways to be efficient with the customer's time while providing the best service and building an enduring positive relationship with the customer.

When asked to comment on the necessary skills to meet this challenge, many respondents identified a disciplined, efficient approach, success at building positive, long term relationships with customers, and personal motivation as the competencies that characterized highly successful sales people in their organizations. Participants also stated that gaining a customer's trust and achieving in-depth product knowledge were critical skills for the sales function in the future.[1] Again, these observations were shared by participants across a wide variety of industries.

It is the contention of this paper that regardless of product market position, firms across the U.S. face the same set of challenges in the sales function. While the customer of 3 years ago might have been satisfied simply with excellent product knowledge, the customer of the future will now expect the sales person to meet his/her expectations of excellent service product knowledge and efficient use of limited time as well. Responses from our

focus group participants suggest that this challenge is consistent across industry type and market share position. Moreover, managers who participated in the focus groups indicated that the primary strategy for retaining and enticing customers was to build a long term trusting relationship with the customer. Hence, the sales function is now primarily one which will generate revenues by creating a loyal, well-served customer base. The development of strategies that lead to a long-term relationship with the customer is the key thrust of the sales function across the industries represented by these respondents.

It is important to note that, currently, firms pursue different types of sales training initiatives, but that all were searching for sales training that would render their sales staff successful at developing enduring positive relationships with customers. Thus, while firms may differ with respect to how they approach training, the competency content outside of the product specific content is, according to our focus group participants, likely to be quite similar.

As economies slow globally and as competition remains keen for customers, most firms must devise ways to maintain profits at current levels. The most desirable method for doing so is to improve revenue. Often, improving revenue entails improving the sales performance of their field forces. The main challenge of sales training will be to provide sales people with the competencies that allow them to develop trusting long-term relationships wit their clients. Thus, a firm's ability to improve sales performance will rest on the degree to which it is successful in imbuing its sales staff with the necessary competencies identified in this study.

Contribution to HRD

This conclusion is important to HRD in that it isolates the simultaneous stresses that sales people face and suggests that training initiatives in the sales function should target the specific challenges noted, as well as the simultaneity of those challenges. The sales person of the future must be efficient, knowledgeable, and must be skilled at creating a positive relationship with the customer that leaves the customer highly satisfied.

Limitations

As mentioned earlier, this paper is based upon a small sample and the conclusions should therefore be considered qualitative rather than quantitative. The participating organizations, however, tended to have a good deal of experience with sales training and were from a wide variety of industries and organizational sizes. In addition, It is important to note that most respondents were managers and that as noted in endnote 1, mangers views of the necessary competencies for success in sales often diverge from that suggested by objective criteria (Vinchur, et al; 1998).

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Performance- and Learning Support With On-line Help Systems: An Effectiveness Study

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This study is on employees working in the field of production, planning & engineering and inventory, who depend heavily on a computer for carrying out their tasks. To cut training expenditure the company developed and implemented an on-line help system for all their questions and training needs. The researchers monitored the implementation phase for six months and looked at the usability and effectiveness of the help system in terms of the learning results and the performance improvement of employees.

Keywords: Performance Support, On-Line Help Systems, Effect Evaluation

When equipping the work environment with resources, there is an increasing use of new technologies. A very common way to integrate working and learning with new technology is providing employees on-the-job with programs to process data, for on-line reference, for electronic advice and -training. Some concepts as for example the concept of Electronic Performance Support Systems (EPSS) go further than the provision of stand alone programs and provide a complete integrated electronic environment (Gery, 1989). The goal of all the effort is a better working and learning process. It is based on the assumption that learning this way will create a more active learning process, more concrete forms of learning, an increase in the transfer of what was learned to the job and a reduction in learning time. Another assumption has to do with the expected performance enhancement of individual employees and the organization and refers to higher quality products and processes and productivity growth (Bastiaens, 1997).

Research Questions

In the previous section assumptions on the advantages of working and learning electronically have been mentioned but little has been empirically proven. On the contrary, next to these assumptions also possible disadvantages were found in the literature that could affect the effectiveness. The first disadvantage is related to the learning process. "Just-in time" training at the workplace, providing employees with small task-oriented training granules and employees taking control of their own learning process can create work behavior problems. Clark (1992) argues that employees may fail to build a unified picture of their job when they have to extract information from a help system. Several small information parts will create a fragmented knowledge base. Novices especially need a high level overview of the content to relate details of training. Clark also has her doubts about the learner control and she illustrates this with the research of Milheim and Martin (1991) which indeed proves that learner control is not as effective as instructional control. This means leaving learners to their own devices and let them make their own decisions is not as effective as let the computer environment taking over control and provide a predefined and structured route (for example with CBT).

An other possible disadvantage is related to the performance support and the work that has to be done. Is the support adequate? Will "just-in time" support "de-skill" workers? Will it "demotivate" workers? Or will it automatize the low level tasks and as a result give workers the opportunity to concentrate on high level tasks (Carr, 1992)?

While these issues provide many questions, the study reported here focuses on the following main research question: "What is the effect of on-line help systems on the performance and learning of the employees."

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The Research Setting

The research was done in cooperation with a large Dutch manufacturing firm with 2700 employees. Together with new working procedures and new computer software, they also introduced an on-line help system for the support of 300 employees at the departments Production, Planning & Engineering and Inventory. From this population 4 jobs (planning engineer, planner, coordinator and warehouse employee) were selected to participate in this research project. A planning engineer supports and prepares orders. He determines the sequence of steps and appropriate equipment. A planner coordinates technical activities and takes care of manufacturing orders. A coordinator takes care of the logistics and also supervises the whole project. A warehouse employee is at services of the different departments and projects. After a selection of these 4 jobs, 103 employees participated in this project, 50 planning engineers, 26 planners, 4 coordinators and 23 warehouse employees.

The main purpose of this study is to evaluate the existing computer environment and monitor the implementation of a new help system. The whole study consists of three parts: (1) an effect evaluation of the basic training as well as the on-line help system immediately after implementation, (2) an effect evaluation of a functional refresher training as well as the help system three months later, (3) measuring the reactions and opinions of end and key users concerning the whole training trajectory and on-line help system. This paper will only examine the second part and focus on the effect evaluation of the on-line help system. The competency of employees is evaluated and the following three hypotheses are tested: (A) Employees have a higher score on a case in their own field of expertise than on cases in related fields, (B) Employees with an on-line help system score higher on a case in their own field of expertise than employees without an on-line help system, (C) Employees score higher on the learner test, after three months working with the help system than on a pretest.

Methodology

The second part refers to a summative evaluation three months after implementation of the on-line helpsystem and after a specific refresher training course in the field of their own expertise. Employees (n = 30) from the above mentioned areas in the division Operations are being asked to solve problems in the their own field of expertise (by means of a case study), but also in three other related fields. This is done because the company has the policy to broaden the present tasks of employees. From this group, 11 employees took part in an observation. In Figure 1 the quasi experimental design (a randomized block design) is diagrammed.

O1	X1	O2	O3
O1	X2	O2	O3
O1	X3	O2	O3
O1	X4	O2	O3

O1: Pretest, 8 questions (n = 30)
X1 – X4: Treatment consisting of four cases in every field of profession (n = 30)
O2: Observation (n = 11)
O3: Learning test (n = 30)

Figure 1. Research design of the study.

In the pretest 30 employees are requested to answer 8 open questions (declarative and procedural). They have to respond to the answers without the support of the on-line help system. The pretest is used as a reference measurement for the learning test.

After that, the employees from the earlier mentioned areas in the division Operations have to solve problems in the their own field of expertise (one case), but also in three other related fields (three cases). The cases are developed in collaboration with key-users. These key-users are experts in a specific field. The cases are

exemplary for their daily tasks. The employees have 20 minutes to solve each case. The key-users are reviewers and they will assess all the results on the cases.

It is expected that (1) employees after a specific refresher training course in the field of their own expertise will have the competence to solve a complex case within 20 minutes; (2) employees will score better on a case in the their own field of expertise; and (3) employees using the on-line help system will score higher than employees without a help system. During their work on the cases, 11 employees will be observed by key-users. The key-users analyze in detail how the employees work with the on-line help system and when they need more information.

Finally, the employees have to sit for a learning test. The test exists of exactly the same sort of questions as the pretest (from a database, all the questions were randomly assigned to the pretest or learning test). The results on this learning test are compared with the results on the pretest. It is expected that employees in the learner test with the on-line help, will score higher than before, without the on-line help system.

Results

Before the hypothesis about the competence is tested, the key-users were asked the question "What makes an employee competent?" According to these key-users, it will not be necessary for employees to solve every problem themselves. There is no need to know everything exhaustive. Therefore, the score on the case has a minimum mean score for competence. A coordinator is competent when he has a mean score of 18.6 points on the cases, a planning engineer needs 24 points, a warehouse employee needs a mean of 25.8 points and a planner has to have a mean score of 27 point. The expectation was that employees after a specific refresher training course in the field of their own expertise will have the competence to solve a complex case within 20 minutes. Table 2 shows the results.

Table 2

Mean Score and Standard Deviation on Cases

	n	M1	s.d.	M2	s.d.	M3	s.d.	M4	s.d.
Planning engineer	8	5.4*	6.5	6.1	8.3	1.6	1.6	6.3	5.8
Planner	11	6.5	7.3	4.9*	8.2	2.6	3.6	4.1	5.1
Coordinator	4	7.5	5.3	2.5	5.0	10.3*	1.5	6.4	4.1
Warehouse employee	7	3.0	6.0	7.9	4.5	2.9	3.8	11.0*	7.8

M1 = mean score on case, field planning engineer (maximum point 40)
M2 = mean score on case, field planner (maximum point 45)
M3 = mean score on case, field coordinator (maximum point 31)
M4 = mean score on case, field warehouse employee (maximum point 43)
* = mean score on case in the own field of expertise

The results on the cases are extremely low. Although the employees all had a specific refresher training course, their score three months after implementation of the help-system is far below expectation. No group meets the demands set by the key-users. No group could give a solution to a case within 20 minutes. It is noticeable that a planner and planning engineer has higher results on other fields than their own. This makes the following hypothesis hard to accept.

It was expected that employees have a higher score on their own field of expertise. To test the hypothesis, all scores are standardized first into Z-scores. After a comparison of the Z-score on a case in their own field of expertise (M = .35, s.d. = 1.21) with a Z-score on a different field (M = -.12, s.d. = .66) a significant difference appears (t-test, t = -2.23, n = 30, en p = .02). Contrary to the results of the planners and planning engineers, the hypothesis will not be rejected. Thus, employees score higher on a case in their own field of expertise.

To evaluate the surplus value of the on-line help system, the group of employees was randomly split into two conditions; 15 employees were allowed to use the help system when they were working on the case in their own field of expertise, the other employees were not allowed to use the help system while working on a case in their own field. *The hypothesis was that employees with a help system score significantly higher on a case in their own field of expertise.* The employees with a help system had a mean Z score of .28 (s.d. 1.15), the mean Z score of the group without a help system was .43 (s.d. 1.29). The t-test on these results showed that there is no significant difference between the two groups (t = .33, df = .28, p = .37). The value of the on-line help system was not evident.

To test the learner results, the employees had to answer 8 open questions in a pretest without the on-line help system. The 8 questions were derived at random from a data bank with 16 questions. After the implementation of the on-line help system they had to answer these questions again. Now they had to answer all 16 questions. This time they were allowed to use the help system. The different score between the two test is interpret as learner results. Table 3 shows the data in the pretest and on the learner test.

Table 3

Mean Score and Standard Deviation on the Pretest (M1) and Learner Test (M2)

	n	M1	s.d.	n*	M2	s.d.
Planning engineer	8	4.5	3.1	5	16.6	5.2
Planner	11	6.2	3.5	9	22.3	10.8
Coordinator	4	11.1	7.5	3	22.0	10.7
Warehouse employee	7	10.6	5.3	7	25.5	14.4

M1 = mean score on pretest (maximum point 40)
M2 = mean score on learner test (maximum point 80)
* = the learner test was not completed by 6 employees

To compare the pretest with the learner test first all scores were standardized into Z scores. *The hypothesis was that the employees score higher on the learner test then on the pretest.* The results on T-test ($t = 4.45$, $df = 23$, $p = .001$) are significant. The employees score higher on the learner test after implementation of the help system.

Next to this quantitative measurement 11 employees were observed while using the help system. In spite of a functional refresher training containing a practical component (using the help system) it appears that not all the employees can be qualified as expert. Many of them have problems while working. The learning part comes in the second place. While observing three employees still have problem to start the on-line help system. Although the content is complete some links from the list of reference to a certain topic fail. It appears that the most important and mostly used feature is the "search engine" (44%). "Activity scheme per field" (28%) and "work instructions per job" (25%) are also used often. In general, the employees told us to be content with the on-line help system. They especially like the on-line support. Whenever they have a problem, they can look for information. This is at odds with the sporadic use of the help system. Reasons for the non use vary from "to many mistakes in the help system" to "a preference for books." The information that is looked up, is basically procedural knowledge. Employees do not use the help system to learn more or look for background knowledge. On the question what information is lacking in the help system no univocal answer is given. Most employees do not know what information they really want to see in the help system. They told us that they need up-to-date information in a complete system with different possibilities for search and retrieval.

All employees are in general positive about the impact of the help system. They believe that the on-line help system will stimulate a more effective performance. Although we will not elaborate on the third part of this study (a questionnaire) it is interesting to see the same results in a larger measurement (N=67). Table 4 shows the answers of the employees on the item "Traditional handbooks and materials are more effective then the on-line help system.."

Apparently there is a difference between the perceptual and the measured effects (see results on cases). When the respondents were asked about the critical success factors for the use of on-line help systems it appeared to be the completeness of the information that was seen as most important. Figure 2 shows the frequencies on the seven most important factors.

Table 4

Results of the Respondents on the Item "Traditional Handbooks and Materials Are More Effective Than the On-Line Help System "

	Traditional handbooks and materials are more effective then the on-line help system	
	N	%
Strongly disagree	16	23.9
Disagree	13	19.4
Neutral	15	22.4
Agree	15	22.4
Strongly agree	8	11.9
Totals	76	100.0

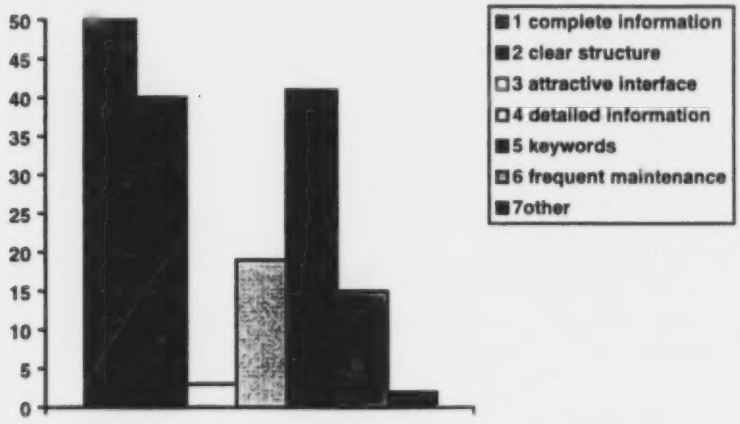

Figure 2. Frequencies in the critical success factors.

The second critical success factor appears to be the possibility to search on key words. Respondents also think that it is important that the on-line help system has to have a clear structure, not to much layers etc. Least important is the graphic design of the interface. They think that a glossy appearance is not critical for the use of the help system.

Regarding a question about a successful implementation and becoming familiar with the on-line help system, Figure 3 shows the results of the respondents. The most important factor for successful implementation is a demonstration of the features of the on-line help system. An information retrieval training making use of the on-line help system makes the help system become more familiar. Another important factor is "the time to practice". Employees need to get familiar with the help system. They want to try and test the help system off the job. Giving them time to learn the help system themselves is also important. The third in row is the integrated use of the help system during functional training. Whenever employees get a functional training, let them use the help system as a tool. The least important is the exhaustive topic list.

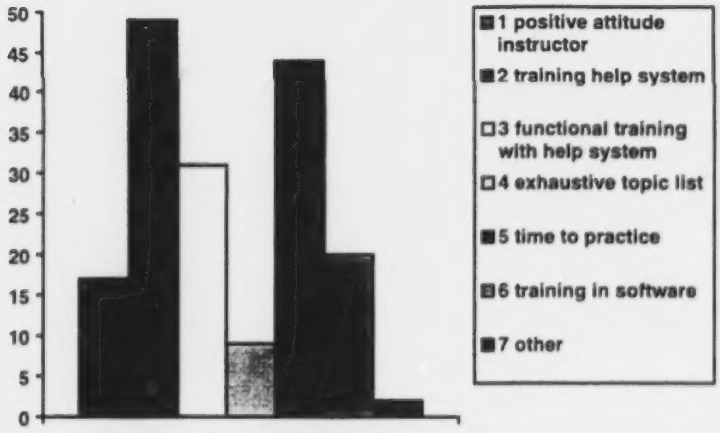

Figure 3. Success factors for the implementation and becoming familiar with the on-line help system.

Conclusions

In general this study shows again the relative impact of electronic sources for the learning process (see also Bastiaens, Nijhof, Streumer & Abma, 1995, 1996, 1997). Main reasons for these results depend often on technical defects as well as on content problems. Often a system is not ready for implementation. Technical problems make the system work with deficiencies, content is often not structured enough (only scanned text) or incomplete. Companies, even nowadays, expect employees to use electronic sources automatically. No attention is paid at the implementation process of electronic sources, at the training of information retrieval skills, or at the human interface. Employees do not use electronic resources inherently. Particularly with help systems it is important to learn more about the features and advantages of help systems. The expectations on electronic sources are often pitched to high. Precisely as in this project the company expected the help system to answer every need for training. The regular training program was cut down and the help system was developed separately from the general training. As the results show three months after implementation the performance of the employees on the cases is still below the required competence level. Even if it is recommendable to develop a on-line help system then a integrated development and use of the help system in the general training is important. Employees need to learn how to use an on-line help system.

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Readiness of HRD Instructors to Engage in On-line Instruction

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Computer-assisted instruction has played an important role in both corporate and academic learning. The purpose of this study was to investigate the readiness of two groups of HRD professionals to engage in online instruction and use computer-mediated communication. Learner readiness focused on the contextual environment (e.g. computer hardware & software, accessibility to the Internet, and supporting environment to study); computer experiences; and attitudes toward Internet-based instruction and distance education. The results of this study are intended to (1) help designers and managers better understand learner environments and characteristics and (2) identify what should be incorporated as orientation in order to facilitate successful learning in Online instruction and computer-mediated communication.

Keywords: Online Instruction, Learner Readiness, Learner Analysis

The computer and the Internet are playing an ever increasingly important role as a delivery method for corporate training and academic instruction. Because of the interactive, multimedia capabilities of the World Wide Web (Web), Internet-based training is gaining popularity. According to the American Society of Training Development Benchmark Forum (1997), the percentage of companies using Internet/network-based electronic distance learning has increased from 12% in 1994, to 33% in 1995, and 53% in 1996. In addition, current popular and professional literature reveals extensive activity on the part of academic institutions to use the Web in the delivery of undergraduate and graduate instruction.

The Department of Human Resource Education at University of Illinois at Urbana-Champaign initiated two distance education programs in 1998. Both programs use computer-mediated communication (e.g. e-mail, synchronous chat, broadcast audio, digital archives) as a medium to facilitate learning. The programs are: (1) a worldwide program on Improving Training Quality through Post Training Coaching and Peer Mentoring (ITQ); and (2) an online master degree in Education with a Specialization in Human Resource Development. These programs are aimed directly at professionals in the HRD field.

This study attempted to assess the HRD professional readiness for both programs. The findings of the study have implications for the Human Resource Education Department regarding recruiting of students, setting of prerequisites for instruction, designing orientation sessions for new students, and designing of Web based instruction. Additionally, other HRD professionals who are planning online instructional activities can learn from the procedures and results of this study.

Problem Statement

The decline in the cost of personal computers, the increase in computer capability, and the simplification of access to the Internet have contributed to the growth of computer-based instruction. Many educators and trainers who use the Web as an educational tool assume that learners have access to e-mail and the Internet. However, there is a need for research in computer-based distance education to discover the computer and communication skills of students (Bizhan, 1996). The question of online learners' capability to effectively participate in this new type of learning remains.

The purpose of this study was to assess the readiness of students to use the computer applications and computer-assisted technologies used in online instruction of two groups: (1) participants in the Workshop on Improving Training Quality through Post Training Coaching and Peer Mentoring (ITQ) and (2) students of the Master of Education in Human Resource Education (HRE) Online degree program at the University of Illinois at Urbana-Champaign.

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Research Questions

This study is guided by three research questions:

1. What is the contextual situation (computer hardware and software, accessibility to a computer and Internet, study facilities, support systems, and learning styles) of learners?
2. How experienced are learners in using computers?
3. What are the learners' attitudes toward Web-based communication and distance education?

Review of Literature

The basic concept of distance education is that instructors and students are separated by distance and that technology is used to deliver the instruction (Moore and Kearsley, 1996; Willis, 1993). Distance education has gained popularity as technology advances, especially in the computer and the Internet. Instruction, whether classroom or web-based, should be planned in a systematic process. Many have argued that Web-based instruction needs to be developed according to instruction design principles. The Internet, particularly the World Wide Web, with its interactive, multimedia capabilities created a new method to disseminate learning , however, teaching and learning through the Internet requires different types of preparation and use by instructors and learners (Porter, 1997).

Distance education can be as effective as the traditional classroom if the background and level of students is considered in selecting the delivery method (Willis, 1993). Students who first start in distance education usually have little or no experience regarding learning from a distance. They have anxiety about taking a distance course. Some might even assume that distance education, when compared to the traditional classroom, is of a lower quality. (Moore & Kearsley, 1996). Learner analysis provides instructors and developers with enough information to design, develop, and implement a distance class. Not only the computer knowledge and skills of students need to be assessed, but also their attitude toward the new type of learning. In a study of factors affecting students' success in distance education by Billing (1989), two of the six factors are attitude toward the distance course (e.g. satisfaction and difficulty with the course) and the students' environment (e.g. employer and family support). Threlkeld and Brzoska (1994) stated that learner characteristics play an important role in the distance student's satisfaction and achievement. Further, they urge that a learner analysis, including learner style, motivation, and background should be conducted before developing a distance course.

From the literature, the three most mentioned attitudes in distance education are (1) students' attitude toward new technology (2) students' perception of their capability to use technology or self-efficacy, and (3) the perceived relative advantages between distance and traditional education. Davis, Bagozzi, and Warshaw (1989) stated that learner attitude toward technology, the perceived usefulness of the technology and distance learning is important in the success of the learner in using computer-mediated communication. In addition, the self-efficacy, the belief that one has the capability to use a technology, plays an important role in users' expectations and satisfaction in using new technology (Webster & Hackley, 1997). The perceived relative advantage between face-to-face instruction and distance education is also important. Even though learners have a positive attitude toward the technology, they may not have the positive attitude toward the distance education. They might also think that the traditional classroom is more effective (Moore & Benbasat, 1991; Webster & Hackley, 1997).

Learner analysis is helpful to decide whether an orientation session should be included. It is desirable for distance students to have an orientation session where they can find out how the delivery system works and what is expected (Moore & Kearsley ,1996; Threlkeld & Brzoska, 1994). Bizhan (1996) also urged that a practical training program based on needs assessment is essential for the success of a computer-based distance education program. Once distant learners are comfortable with the technology, they will engage in learning and communication (Keegan, 1985).

Methodology

In order to reach all of the geographically dispersed subjects, a survey research method was employed.

Subjects

The subjects of this study were: (1) 31 ITQ workshop participants from 18 countries around the world; and, (2) 19 HRE Online students, all are US citizens and live around the Chicago metropolitan area and were enrolled in the HRE OnLine program during the summer of 1998.

Instrumentation

Three different instruments were used to collect readiness information from subjects. An application form and an online questionnaire were used for the international group of ITQ participants. A second online questionnaire was used with the masters students. The instruments are described as follows.

ITQ Application Form. In addition to general information about applicants (e.g. name, address, and experience), this form consisted of (1) 9 dichotomous response (yes/no) questions regarding computer operating system, e-mail and attachment capability, Internet connection, Web browser and software applications, and (2) six Likert scale items related to computer software application competencies.

ITQ questionnaire. This online instrument contained 34 questions as follows:

- 10 dichotomous response (yes/no) questions regarding Internet access, CD-ROM, sound capability, employer support, technical support, and past experience with Web-based communication.
- 1 checklist related to Web browser skill competency
- 20 Likert scale items regarding: computer competency (e.g. general use of computers, use of multimedia, group discussions, and World Wide Web); English skills in typing, speaking, listening, and reading; learner motivation; self-efficacy; and attitude toward Web-based training and distance education.
- 3 open-ended questions regarding e-mail, Internet, and technology problems that learners have faced.

HRE OnLine Masters Student Questionnaire. For the HRE online students, an online questionnaire was employed to address the research questions. The questionnaire consisted of 42 questions. The details of questions are as follows.

- 17 dichotomous response (yes/no) questions regarding the computer hardware qualifications, operating systems, e-mail and attachment capabilities, Internet connections, Web browsers, software applications, accessibility to computer and Internet, employer support, technical support, and past experience of Web-based communication.
- 5 checklist items related to the availability of various computer software programs and computer competency in using Web browsers, word processors, e-mail, and Microsoft PowerPoint.
- 19 Likert scale items regarding computer competency (e.g. general use of computer, use of multimedia, group discussion, World Wide Web, word processors, and Microsoft PowerPoint), learner motivation, self-efficacy, attitude toward Web-based training and distance education.
- 1 Open-ended question regarding technology-related problems that learners have faced.

Data Collection

The questionnaires were posted on the Web sites of both programs (ITQ workshop and HRE OnLine program Web site), and subjects filled out the questionnaires and submitted them electronically. In addition, the e-mail and paper versions of questionnaires also were made available. For the HRE online group, during the first class, which was a face-to-face class, the instructor informed students about the questionnaire and that the questionnaire was part of a voluntary assignment. After one week, the instructor followed up by sending an e-mail to HRE Online students and mentioned it during a synchronized chat hour of the class.

For ITQ subjects, the participants' application form was collected in the spring of 1998. Data were compiled, then the questionnaire was designed to gather the additional information. The ITQ Coordinator informed participants regarding the questionnaire via e-mail with a brief description of the Web site and the purpose of the questionnaire. Two weeks after the first e-mail, a follow-up e-mail was sent by the ITQ Coordinator.

Data Analysis

Collected data were analyzed using both quantitative and qualitative methods. The mean and percentages of the quantitative responses were calculated. A content analysis and categorization was used to analyze the answers from the open-ended questions.

Results

The average response rate was 88% (the response rates of the ITQ and HRD groups were 87% and 89% respectively). The major findings of this study were organized by research questions and are presented as follows.
Research Question 1: What is the contextual environment (computer hardware and software, accessibility, study facilities and support systems) of the learners?

All respondents indicated that they had an IBM compatible computer with a Windows operating system. The majority of respondents' computers are well equipped with sound and CD-ROM. All of them reported having Internet access. In terms of the learners' computer applications, all of them have a Web Browser. Only one respondent reported not having e-mail with attachment capabilities. The majority of respondents have word processor programs and database programs. However, only 48% of the respondents have a presentation program (see Figure 1).

Figure 1: Computer Equipment, software, and Internet

Computer Equipment, Software, and Internet	**% of respondents**
Window Operating software	100%
Sound	84%
CD-ROM	88%
Internet Access	100%
Web Browser	100%
E-mail with attachment	98%
Word Processor	87%
Presentation Program	48%
Database Program	75%

Most of respondents have an environment that supports the use of online programs (see Figure 2). Though 81% of the respondents are primary users of their computers, all reported having convenient access to computers, and 96% have convenient access to the Internet. Both programs reported the same result except the employer support, 96% of ITQ respondents received employer support, where only 65% of the HRE OnLine students had that support. In addition, the majority of the ITQ subjects (85%) had technical assistance available but only 24% of HRD students had that.

Figure 2: Participants' Contextual Elements

Contextual Elements	**% of respondents**
Primary user of computer	81%
Convenient access to computer	100%
Convenient access to Internet	96%
Own place to work for extended period of time	98%
Employer support	96%
Technical assistant available	65%

Regarding the problem of technical problems that participants have faced, ITQ respondents reported problems regarding the Internet such as limited access, limited Web browser skills, and technical problems with network and equipment.

Research Question 2: How experienced are learners in using computers?

On a competency scale of 1 to 4 (1 = poor and 4 = good), the respondents reported that their skills are high in terms of general use of the computer, search for information in World Wide Web, use of e-mail, and use of word processors (see Figure 3). However, their skills are less strong for use of CD-ROM and multimedia. Respondents

stated that they are least familiar with the use of the group discussion application such as electronic bulletin boards and chat rooms.

As for Web browser competency, most respondents are able to view and navigate the World Wide Web, and print web pages (see figure 4). Though the average of respondents who are able to use search tools is 60% , the difference between two group is apparent. About 71% of HRD respondents are able to use search tools versus only 50% of ITQ respondents. Both groups are less familiar with the advanced skill of Web browsers such as bookmarks, downloading programs from the Internet, and using plug-ins such as RealPlayer.

Figure 3: Participants' computer application skills

Computer Application Skills	Average Rating
General use of computer	3.36
Use of CD-ROM	2.86
Use of multimedia	2.57
Use of e-mail	3.25
Search for information (World Wide Web)	2.94
Group Discussion (E-Bulletin Board, Chat)	2.16
Use of Word Processor	3.53

Note: 1 = Poor, 2 = Below average, 3 = Average, and 4 = good

Figure 4: Participants' Web Browser Skills

Web Browser Skills	% of respondents
View and navigate the Internet	87%
Use search tool	60%
Bookmark sites and organize bookmark files	42%
Print Internet page	76%
Download program from Internet	48%
Use Plug-in such as Real Player to listen audio files	35%
Use Plug-in such as Real Player to view video files	29%
Use acrobat reader to open and read document .pdf files	25%

Research Question 3: What are learners' attitudes toward computer-mediated communication and distance education?

Learners seem to have a positive attitude regarding their use of computers and new technologies (see Figure 5). The respondents reported that they enjoy using their computer and the Internet. In terms of their motivation and learning characteristics, the respondents seem to agree that they are motivated to use new technologies and they are self-motivated and independent learners. One source of motivation is that learning about distance learning technology will support their career goal. As for the learners' self-efficacy, respondents reported that they are confident in their ability to do well with network-based communications and they will try new technologies even if they feel a little bit apprehensive.

In term of their attitudes toward computer-mediated communication and distance education, although the respondents appear to agree that it is not necessary to be in a traditional classroom environment to learn, they are not certain about the effectiveness of computer-based training when compare to a traditional classroom.

Basically, the results of this study focus on obtaining learner characteristics which help the design, development , and implementation of an online program. The strengths of responding groups is that they have computer hardware, software, and Internet access that enable the implementation of online programs and they are motivated and confident that they will do well with the technology. The weak point is their computer application skills especially with multimedia and Web Browsers. In addition, They have not been exposed to the use of the Internet as a learning method and they are not certain in the effectiveness and efficiency of web-based training. One implication is that an orientation should be designed to show participants how the new technology works. Also, Web Browser skills training should be provided in the orientation to help participants to be more efficient with the online instruction and reduce the frustration with new technology. The orientation will prepare to participate in the virtual environment and reduce their anxiety in taking online classes, thus, increasing their satisfaction with learning. Another implication for the implementation of online programs is that of technical support. With only 25% of HRD online

students having technical assistance available, the HRD Online program needs to provide sufficient technical support to the students.

Figure 5: Participant's attitude toward computer-mediated communication and distance education

	Rank
I enjoy using computer in general	4.48
Overall,, I enjoy using Internet	4.34
I am motivated to use new technology	4.54
I am confident that I will do well with network-based communication	4.48
When I am asked to use new technology, I will try them even if I feel a little bit apprehensive	4.58
I believe computer-based training via the web is as effective as traditional training	3.90
It is very important that the trainees and trainers are in the same room	3.10
If the class were to use a traditional format, it would be better	2.57
It is not necessary to be in a traditional classroom environment to learn	4.19
I am a self-motivated, independent learner	4.60
Learning about distance learning technology will support my career goals	4.55

Note: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Discussion

Learner analysis is very important to the design, development, and implementation of the online program. The analysis should not only look at the equipment, but also consider the skills and attitude toward the new technology. The more understanding of the learners, the better the online program can respond to the participants or customers needs. Thus, readiness of the learners is the stepping stone to the success of an online program.

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Motivating Community College Instructors to Teach On-line: An Exploration of Selected Motivators

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This investigation explored differences in motivators for teaching courses on-line as reported by 405 instructors at 38 community colleges. Differences in reported motivators were examined with respect to age, gender, subject matter taught, knowledge of computers, knowledge of the web, prior experience with on-line courses, size of employing institution, and geographical location. The findings hold implications for organizations seeking ways to influence instructors to teach their courses over the World-Wide-Web.

Keywords: Web-Board Instruction, Community College, Motivation

The creation and rapid growth of the Internet, especially the graphical portion known as the World-Wide-Web, is changing how people learn (Green, 1996). For example, it is estimated that in the near future 25% of all community college students will acquire part of their education via the Internet and that community colleges will compete nationally/internationally for students via distance learning technologies (Morrison, 1995). Many community colleges already offer a wide array of courses, certificates and degree programs through various on-line delivery modes. Examples include Bellevue Community College, Brevard Community College, Clackamas Community College, Colorado Community College Online, Edmonds Community College, Greenville Technical College, Hawkeye Community College, Laramie County Community College, NorthWest Arkansas Community College, Pikes Peak Community College, and Vance-Granville Community College.

Some educators believe that community colleges of the twenty-first century will need to employ a variety of instructional delivery modes (Weiner, McVeigh, Clever, Brasington, & King, 1997). They hold that many students will be able to continue the traditional pattern which is to meet at regularly designated class times at a particular location. For many others, accessibility to educational offerings will be a major concern. Distance learning over the World-Wide-Web will be one way of addressing the access issue. However, many community college faculty have concerns about distance education and are reluctant to embrace its technologies. They are concerned about the impact of technology on their roles as faculty members (Monaghan, 1995). Resistance centers on several fears expressed by faculty--"fear of change, fear of time commitment, fear of appearing incompetent, fear of techno failure, fear of reprisals (Rutherford, 1997). Expressions of doubts by faculty should be viewed by planners as valuable input for developing successful strategies to motivate faculty to adopt technology in their teaching (Aiken, 1997).

Related Literature

If it is assumed that most community college instructors have a choice to teach or not to teach on-line and that Internet-Based-Instruction is a technological innovation, there are three bodies of literature particularly relevant to the subject of this investigation. They include individual decision-making, innovation diffusion, and motivation theory. With respect to individual decision making, Carney (1991) believes that people exhibit one of four decision making styles (i.e., confusion, dependent, intuitive, planful). According to Carney, persons exhibiting the confusion style make decisions out of "utter confusion." Dependent decision makers simply defer decisions to others. Intuitive decision makers base their decisions on "gut-level" feelings, where as, planful decision makers systematically make decisions based on relevant facts/options.

Decision making can also be viewed in terms of rational decision making, technological determinism, and praxis. The rationalistic view to decision making sees individuals undertaking extensive analysis of problems and

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opportunities prior to making a decision on a specific course of action (Forester, 1989). Technological determinism may be defined as the belief that one's future is being shaped by technology (Forester, 1989). Determinists see the decisions of people being influenced more by technology than individual free choice. The praxis view of decision making emphasizes the role everyday cultural practices play in individual decisions. It holds that individuals are socially emerged in culturally defined patterns of behavior and these patterns of activity shape the way people make decisions (Coyen, (1997).

According to innovation diffusion theory (Burns & Stalker, 1961; Harris, 1994: Marchwick, 1997; Rogers, 1995; and Surry, 1997), there are characteristics of any new technology that affect the likelihood of its adoption. They include relative advantage (e.g., is it better than the technology currently in use?), compatibility (i.e., does it fit into existing practices and beliefs?), complexity (i.e., can people understand it?), trialability (i.e., can people try it out before it is permanently adopted?), observability (i.e., can people see the operations and results?), and re-invention (i.e., can people modify it?). Research results suggest that the first three characteristics (i.e., relative advantage, compatibility, and complexity) have the most significant influence on the adoption and implementation of technological innovations (Klopfenstein, 1997).

One of the best known innovation diffusion theorists, Everett Rogers, (Sapp, 1998) believes the adoption of new innovations is affected by both the nature of the innovation itself as well as those considering its adoption. Rogers holds that adopters of innovation can be grouped into five groups; innovators, early adopters, early majority, late majority, and laggards. Innovators adopt new innovations right away, are risk takers, and make up 2.5% of the population. Laggards make up 16% of the population and are the last to adopt an innovation. They adopt new innovations only under duress. Approximately 13.5% of the population are early adopters. Once its usefulness has been shown, they quickly adopt the new innovation. Around 34% of the population are early majority adopters and another 34% are late majority adopters.

In addition to individual decision making and innovation diffusion theories, motivation theorists also provide insights into individual decision making. The classical "scientific" management theory viewed employees as rational economic decision makers driven by a desire to earn the most money possible (Taylor, 1947). This view suggests that extrinsic rewards might cause an employee to adopt a new technology. Maslow and Herzberg offer additional factors which might influence individuals to adopt new technologies and/or to take on extra work. In 1954 Maslow offered his human "needs hierarchy." He held that human beings have universal needs (i.e., physical, security, social, self-esteem, and self-actualization) arranged in a hierarchy. Herzberg (1959) theorized that human beings needed their "hygiene" needs (i.e., company policy and administration, interpersonal relations, supervision, salary, and working conditions) adequately met before they would work at all. He argued that employees were only motivated to work productively by "motivator factors" (i.e., achievement, recognition, work itself, responsibility, advancement).

McGregor and McClelland also emphasized the part need satisfaction plays in worker behavior. In 1960 McGregor offered Theory Y which stressed people's need for achievement and satisfaction from a job done well. McClelland (1967, 1975) accentuated the importance of achievement, power and affiliation needs as motivators. Other authors have emphasized how felt needs vary with respect to career stage and the availability of need satisfiers. For example, White (1973) found the managers most likely to be motivated by security and social needs to be those who had reached a peak in their careers, and for whom some of the other motivators were no longer available. Job interest was a motivator for people who had interesting jobs, variety and challenge were motivators for those with challenging jobs. In 1986, Thorpe looked at 63 organizations in depth and found support for the "Reactance Theory." Reactance Theory holds that people need to feel they have some control and freedom in their work. They are not passive receivers of motivational stimuli, but act in ways to secure control, freedom, and improved chances of obtaining rewards (Bowey, 1997).

In 1964, Vroom offered his Expectancy Theory. He stressed the importance of employees believing that they can improve their effort, that this increased effort will lead to improved performance, and that improved performance will be recognized and lead to a desired reward. However, Wannus, Keon and Latack (1983) showed that workers do not usually go through an elaborate process of information processing and rational decision-making. Rather they base their actions on habit, on expectations derived from previous experience and on advice from respected co-workers.

Research Questions

For the purpose of this study, three research questions were posed. They included:

1. To what degree do selected motivator variables influence instructors to teach courses on-line?
2. Is there a significant difference in the degree to which selected motivator variables motivate instructors to teach courses on-line?
3. Is there a significant difference in selected motivator variables with respect to age, gender, subject matter taught, knowledge of computers, knowledge of the World-Wide-Web, prior experience with on-line courses, size of organization, and geographical location?

Methodology:

A web search was undertaken to locate the universal resource locators of on-line faculty and staff e-mail directories for colleges listed in Peterson's 1997 Guide to Two Year Colleges. Thirty-eight colleges were randomly selected to serve as the sample group. A combined cover letter and 31-item questionnaire was electronically mailed to faculty in the selected colleges. Respondents were also given instructions on how to return the questionnaire. Options included e-mail, fax, or the U.S. postal service. Fax and U.S. mail return options were offered to respondents desiring complete anonymity. Items on the questionnaire related to personal/occupational information, perceived knowledge of computers and the Internet, past experience with on-line courses, and motivators for teaching courses on-line.

Data from the questionnaires was entered into a statistical database from which descriptive and comparative statistics were generated. Descriptive statistics included frequency counts, percentages, and means scores for the various variables. Comparative statistics included the results of Chi square, Anova, and follow-up t. tests A series of Chi square tests were performed to test for significant differences in motivators with respect to gender, subject matter taught, geographical location, and prior experience with on-line courses. Anova tests were used to test for significant differences in motivators with respect to age, knowledge of computers, knowledge of the Internet/World-Wide-Web, and size of employing organization. The probability level for determining statistical significance was $p = .05$.

Results

Of the 609 surveys electronically delivered to instructors at 38 community colleges, 405 were returned (66.67% return rate). Three hundred fifty-nine surveys (88.64%) were returned by e-mail, 33 (8.15%) by U.S. postal service, and 13 (3.20%) by fax. Respondents had a mean age of 45.53 years. One hundred ninety-seven (48.76%) were female and 207 (51.24%) were male. Thirty-one (7.65%) of the respondents had taken a course on-line and 14 (3.55%) had prior experience teaching courses over the Internet.

With respect to question one (i.e., To what degree do selected motivator variables influence instructors to teach courses on-line?), several factors were found to have a motivating influence on instructors. The strongest motivators were make courses more accessible to students, being extrinsically rewarded with more money, equipment, released time etc., and challenge (see Table 1). The variable with the least motivating influence was ordered to teach a course on-line.

As to question two (i.e., Is there a significant difference in the degree to which selected motivator variables motivate instructors to teach courses on-line?), a one factor anova test revealed significant differences among the variables in terms of their motivating influence (DF = 405, Sum Squares = 1517.796, F Score = 1.794, P = .0001). Follow-up t tests showed that making courses more accessible to students, receiving extrinsic rewards such as more money, equipment, released time etc., the challenge of teaching a course on-line, interest in computers, and being ordered to teach a course on-line significantly differed from one another as well as the other five motivators (See Table 2).

Regarding question three (i.e., Is there a significant difference in selected motivator variables with respect to age, gender, subject matter taught, knowledge of computers, knowledge of the World-Wide-Web, prior experience with on-line courses, size of organization, and geographical location?), a series of One factor Chi square tests revealed significant differences in the selected motivators with respect to computer knowledge and knowledge of the Internet/World-Wide-Web (see Table 3 and Table 4). Follow-up t test revealed differences with respect to making courses more accessible to students, the challenge of teaching a course on line, interest in computers, chance of being promoted, chance of being recognized, in order to keep job, to go along with the crowd, and if ordered (see Table 5 and Table 6).

Table 1. Mean Rating For Motivators For Teaching A Course On-line N=405

Variables	Mean	SD
Make courses more accessible to students	3.978	1.133
Extrinsic rewarded with more money, equipment, released time etc.	3.681	1.361
Challenge	3.36	1.367
Personal interest in computers and technology	3.188	1.386
Increase chances of being promoted/tenured	2.365	1.411
Public recognition from superiors	2.272	1.233
Necessary to keep job	2.156	1.457
Expanded formal job responsibilities	2.084	1.208
If everyone else was doing it	2.042	1.221
Ordered to teach a course on line	1.884	1.336

Table 2. Significance Differences Between Selected Motivators N=405

Variables	Accessible	Rewarded	Challenge	Interest computers	Promoted	Recognition	Keep job	Expand job	Go along everyone	Ordered
Accessible		*	*	*	*	*	*	*	*	*
Rewarded	*		*	*	*	*	*	*	*	*
Challenge	*	*		*	*	*	*	*	*	*
Interest computers	*	*	*		*	*	*	*	*	*
Promoted	*	*	*	*			*	*	*	*
Recognition	*	*	*	*				*	*	*
Keep job	*	*	*	*	*					*
Expand job	*	*	*	*	*	*				*
Go along everyone	*	*	*	*	*	*				*
Ordered	*	*	*	*	*	*	*	*	*	

*Significant difference at .95%

Table 3. One Factor Anova Test For Knowledge of Computers and Selected Motivators N=405

Variables	DF	Sum Squares	F Score	P
*Accessible	4	14.058	2.739	.0285
Rewarded	4	16.587	2.256	.0626
*Challenge	4	36.199	4.994	.0006
*Interest computers	4	125.259	19.27	.0001
*Promoted	4	21.727	2.756	.0277
*Recognition	4	21.275	3.584	.0069
*Keep job	4	22.98	2.762	.0275
Expand job	4	6.948	1.177	.3206
*Go along everyone	4	23.268	3.961	.0037
*Ordered	4	40.243	5.793	.0002

*Significant difference at .95%

Differences among the motivators were also found with respect to age (DF = 4, Sum Squares = 19.497 F = 2.677, P = .0316). Instructors under 30 years of age rated extrinsic rewards a significantly greater motivator than did instructors in their 40s', 50's, and 60's. The same was true for instructors in their 30's compared to individuals in their 60's. Chi square tests showed significant differences in the motivators challenge, interest in computers, making courses more accessible to students and having taken a course on-line (DF = 4, Total Chi Square = 10.252, P = .0364; DF = 4, Total Chi Square = 13.054 P = .011; DF = 4, Total Chi Square = 11.794, P = .0189 respectively). Chi square tests also showed significant differences in the influencing power of selected motivators with respect to having previously taught courses on-line and challenge, interest in computers, and making courses more accessible to students (DF = 4, Total Chi Square = 20.211, P = .0005: DF = 4, Total Chi Square = 20.78, P = .0004: DF = 4, Total Chi Square = 12.341, P = .015 respectively). Instructors with prior experience with taking and teaching courses on-line tended to be more highly motivated by the challenge of teaching courses on-line, their interest in computers, and making courses more accessible to students than instructors with no prior experience with on-line courses.

Table 4 One Factor Anova Test For Knowledge of The Internet/World-Wide-Web and Selected Motivators N=405

Variables	DF	Sum Squares	F Score	P
*Accessible	4	25.425	5.077	.0005
Rewarded	4	15.218	2.061	.0853
*Challenge	4	66.311	9.625	.0001
*Interest computers	4	104.903	15.766	.0001
Promoted	4	13.436	1.686	.1524
Recognition	4	10.732	1.763	.1356
*Keep job	4	27.421	3.297	.0113
Expand job	4	3.818	.639	.6349
Go along everyone	4	9.178	1.54	.1899
*Ordered	4	34.344	4.91	.0007

*Significant difference at .95%

Table 5. Follow-up T Tests For Knowledge Of Computers and Selected Motivators N=405

Knowledge of Computers	Accessible	Rewarded	Challenge	Interest computers	Promoted	Recognition	Keep job	Expand job	Go along everyone	Ordered
Much Less-Less										*
Much Less-Same			*						*	
Much Less-Greater			*							
Much Less-Much Greater			*	*	*					
Less-Same	*		*	*	*	*				*
Less-Greater	*		*	*	*	*				*
Less-Much Greater	*		*	*	*	*	*			*
Same-Greater				*			*		*	
Same-Much Greater				*		*			*	
Greater-Much Greater				*						

*Significant difference at .95%

Table 6. Follow-up T Tests For Knowledge Of Internet/World-Wide-Web and Selected Motivators N=405

Variables	Accessible	Rewarded	Challenge	Interest computers	Promoted	Recognition	Keep job	Expand job	Go along everyone	Ordered
Much Less-Less										
Much Less-Same										
Much Less-Greater				*						
Much Less-Much Greater	*			*						
Less-Same							*			*
Less-Greater	*		*	*			*			*
Less-Much Greater	*		*	*			*			*
Same-Greater			*	*						*
Same-Much Greater	*		*	*						
Greater-Much Greater	*			*						

*Significant difference at .95%

Conclusions

Several conclusions may be drawn from the results of the study. It appears that some of the selected motivators (i.e., making courses more accessible to students, receiving extrinsic rewards, the challenge of teaching a course on-line, and personal interest in computers) may have potential to influence some instructors to teach courses over the Internet. On a 5-point scale each of the motivators had a mean score of 3.188 or above. One might also conclude that ordering an instructor to teach a course on-line would have limited motivating value. On a 5-point scale being ordered to teach a course on-line had a mean motivating rating of 1.884.

Another conclusion derived from the study is that particular motivators (i.e., making courses more accessible to students, receiving extrinsic rewards, the challenge of teaching a course on-line, interest in computers, and being ordered to teach a course on-line) differ significantly from one another and other motivators in their ability to influence instructors to teach courses over the Web. Conversely, certain motivators were very similar in their ability to motivate instructors. Such was the case with improve chance for being promoted and public recognition from supervisor; expanding job and going along with the crowd; and keeping job and public recognition, expanding job, and joining the crowd.

Finally, it can be concluded that the influencing strength of selected motivators varied with respect to particular personal/occupational circumstances. For example, the strength of selected motivators varied with respect to the age of the instructor, their knowledge of computers and the World-Wide-Web, and their prior experience with on-line courses. The motivating strength of challenge of teaching a course on-line, chances of being promoted, public recognition by supervisor, interest in computers, and making courses more accessible to students, tended to increase with instructors' knowledge of computers. Likewise, the challenge of teaching a course on-line, increased chances for promotion, public recognition by supervisor, interest in computers, making courses more accessible to students tended to be stronger for instructors with more Internet knowledge than their colleagues. The motivating value of join the crowd was the greatest for instructors perceiving their computer knowledge to be similar to their colleagues. Ordered to teach a course on-line and to keep job had the greatest motivating value for instructors with computer and Internet knowledge "less" than their colleagues. Extrinsic rewards tended to be a greater motivator for younger versus older instructors. The challenge of teaching a course on-line, interest in computers, and making courses more accessible to students tended be stronger motivators for instructors who had taken or taught courses on-line.

Discussion

The findings of this investigation hold implications for community college administrators attempting to influence their instructors to offer courses on-line. Demonstrating to some instructors how offering their course(s) on-line will make the course(s) more accessible to learners, or telling how it will result in tangible rewards for themselves (e.g., extra money, equipment, or released time), or showing them how it will mentally stimulate them may help to persuade them to offer courses on-line. Such efforts are likely to be most effective with individuals who already have an interest in computers, are knowledge about the Internet/World-Wide-Web, are 30 years of age or younger, and have some prior experience with on-line courses.

It is possible that many instructors see increasing the accessibility of community college courses as a legitimate use of the World-Wide-Web. Some instructors may recognize the extra time and work involved in teaching a course on-line (Kirk and Shoemaker, 1997) and thus expect to be either extrinsically (e.g., pay, equipment, released time) and intrinsically rewarded (e.g.,, mentally challenged). It is suspected that the mix and nature of the expected benefits may differ with respect of an instructor's age and work situation.

Because many of the motivators had significantly greater motivating value for instructors who were interested in technology and saw themselves as being more knowledgeable about technology than their colleagues, community colleges may wish to consider a number of actions. They may first want to identify and get instructors with the greatest interest and knowledge of web-based-instruction to offer their initial on-line courses. They may also want to consider providing instructors more technology training. Part of such training could include having instructors themselves take a course on-line.

This research generally supports other research findings showing motivation varies between individuals and groups (Legge & Millward (1968); White (1973); and Blackburn and Mann (1979). Individuals significantly differed in the degree to which they claimed to be influenced by selected motivators with respect to age and other personal/occupational differences. The results are also consistent with Reactance Theory (i.e., the belief that people need to feel they have some control and freedom in their work situation). Of the 10 motivators studied, being ordered to teach a course on-line had the smallest motivating value.

Additional research studies seeking to determine the degree various motivators actually influence instructors to offer their courses on-line are needed. While instructors in the study indicated the extent to which selected motivators would influence them to teach a course on-line, it did not measure the actual degree instructors were influenced by the selected variables. Future studies might also look at the influencing strength of potential motivator variables not examined in this investigation. Other potential motivators mentioned by respondents included being able to work at home, more flexible hours, reduction in work load, being able to team teach, assistance in learning technology, technical support, and improved audio/video capabilities.

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Towards a Meaningful HRD Function in the Post-Command Economies of Central and Eastern Europe

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Development of the HRD function in the post-command economies of central Europe may benefit the western agents involved in this cross-cultural collaboration as much as the client companies who utilise western expertise. An examination of the existing knowledge-base among managers whom we seek to train as HRD practitioners suggests that our efforts may be constrained by concepts of knowledge transfer, and resistance to change, which are flawed. I suggest some alternative perspectives.

Keywords: Central & Eastern Europe, Resistance to Change, Knowledge Transfer

Human Resource Development is one of several functions which is regarded as underdeveloped, if not absent, among the organizations of central and eastern Europe, as noted by a variety of commentators both before the changes which took place in 1989 (see e.g. Lane 1985; Obloj 1986) and after (Eberwein & Tholen 1997; Jankowicz 1991; Kozminski 1996). Accordingly, the extensive efforts of the last ten years to transfer knowledge and expertise into the post-command economies have generally included material on the purpose, rationale, procedures and techniques associated with the development of human resources, whether conceptualised as "training" or as "HRD", and attempts to aid and/or inform efforts to reshape individual organisations have included a consideration of the content and structural implications at both individual (Lee 1996), organisational (Strzyzewska Kaminska & Wawrzyniak 1996), and institutional (Aguilar 1996), level.

This is a complicated endeavour. There are obvious constraints on outcomes; to take just one example, as when western joint venture partners retain control over human resourcing policy so that the indigenous partner's involvement is limited to simple personnel administration and training provision (Kozminski 1993). In such circumstances, indigenous staff in the joint venture company have little opportunity to contribute to either function at the strategic level, and little exposure to contemporary ideas about organisational and staff development in the wider sense- no HRM or HRD is possible– so that the knowledge that is transferred from the market economy to the post-command economy, may be partial and limited after even the best designed programme.

However, my intention in examining the constraints involved is to focus less on outcomes, and more on the process of transfer itself. My objective is to examine our definitions of knowledge transfer, and the way we construe success in that endeavour, with particular reference to the concept of 'resistance to change'. I believe that a number of untenable assumptions are typically involved, and that there is little point in worrying about difficulties at the outcome level until we have developed more appropriate understandings of the process itself.

The Process of Knowledge Transfer: Two Models

There are two alternative ways of thinking about the process involved.

Export Sales

The simplest approach to knowledge transfer is to view it as *technology* transfer; as a process in which the donor and the recipient share the same conceptual background and assumptions, so that the goods or services to be transferred can be put to use by the recipient after appropriate instructions have been clearly conveyed. Knowledge is seen as a *commodity*: something which comes in discrete units, something to be transported, plugged in and utilised. If the transfer occurs across linguistic boundaries, then the instructions have to be translated with professional competence, as if we were selling a piece of machinery and had to stick foreign-language labels on the controls while remembering to include a well-translated instruction manual as part of the package being despatched.

The metaphor is one of 'export sales': the recipient stands in the role of consumer and is persuaded that s/he needs the product, the donor in the role of producer or salesperson; and both parties are seen as sharing common assumptions about the nature and form of the transaction involved.

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New Product Development

A rather less crude approach is to see knowledge transfer as a process of *information* transfer, a process by which the donor removes uncertainty in the recipient. Knowledge is seen as an *abstraction*: concepts, ideas, principles, guidelines, theories, and other immaterial entities. If the transfer occurs across linguistic boundaries, then, again, the material has to be translated, and this is seen as unproblematic: it is assumed that each of the two languages encode phenomena in the same way, so that the abstractions expressed in the language used by the transmitter can be reproduced identically by the receiver. Misunderstandings by the receiver are regarded as a form of noise during transmission: "inaccurate translations", or simple misunderstandings between the transmitter and the receiver, resolvable by a repetition of the information "in other words" within the same encoding system.

However, this sort of account is tendentiously over-simplified. A more complex version of the information transfer process is required, in which it is recognised that different natural languages encode phenomena differently: they are in themselves distinct coding systems. Every language teacher is aware of the importance of idiom in conveying meaning- in fact, such linguistic differences in the way in which phenomena are represented run very deep. The professionalism of the interpreter stems from his or her ability to resolve inconsistencies in mapping the meaning encoded in one language onto the meanings that it is possible to encode in another: Millman & Randlesome (1993); Gilbert (in press); Limaye & Victor (1995). Because they determine the very boundaries of the events which different observers perceive in the phenomenal flow, the different grammars, metaphors, idioms and etymologies of different natural languages slice up reality differently (Jankowicz, 1996)– two perceivers using different languages actually experience different events– and, as Czarniawska (1997: 480) puts it in presenting Latour's account of the kind of translation which this mapping requires (Latour 1986), 'the dictionary itself becomes translated': i.e., the meanings differ, depending on the code-book being used to represent a particular encoding.

Even the basic vocabularies of two languages encodes meanings differently. For example, the word 'manager' is capable of expressing a great variety of meanings in English, while the nearest Slavonic terms convey only the more directive and controlling shades of meaning, for a variety of cultural and historical reasons (Jankowicz, 1994; Vlachoutsicos, 1990; Vlachoutsicos & Lawrence, 1990); Significantly, the Polish word for 'training' includes vocational and instructional phenomena in its encoding, but does not readily encode the management and organisational development shades of meaning. Events during the period of the Polish command economy made the notion of 'personal career development', a neutral enough phrase in the English language, extremely problematic, the concept being tainted by a history of self-promotion within the Communist Party career structure at the expense of one's co-workers and the translation of this phrase into Polish encodes an entirely different reality to the one encoded by the original English phrase.

It follows that, in understanding the same experienced phenomenon by means of two different languages, the meaning encoded by one party may be subtly different to the reality encoded by the other. When they interact in transferring knowledge about that phenomenon, the transfer will necessarily involve the collaborative creation of a new, mutually comprehensible meaning, rather than a simple directional "movement of information" between a transmitter and a receiver, as the simple form of the information transfer model suggests.

The metaphor involved is one of 'new product development', rather than 'export sales': the status of the two parties is no longer that of donor and recipient, but of potentially co-equal collaborators; and they interact in developing something new from the material which each contributes. The result might indeed be that the indigenous party gains information, in the sense of having uncertainty reduced; but, equally, the knowledge of the change agent is similarly open to amendment as a result of the dialectic in which both have engaged. As a business practitioner, (McNeill, 1991) has emphasised, misunderstandings by the indigenous party are not a simple matter of unsuccessful transmission, but of unsuccessful knowledge creation. He advocates the use of two interpreters, the task of the second (who must necessarily be informed of the purposes of both parties, not simply of their utterances) being to comment on the success, or otherwise, of the language translation, and the overall dialogue, of all of the parties involved in the attempt at knowledge transfer.

Resistance to Change

If we are to acknowledge cultural differences appropriately and take cross-cultural collaboration seriously, it follows that we need to use the second metaphor rather than the first. The effectiveness of our attempts to transfer knowledge about HRD hinges on our understanding of the process involved, on the sophistication with which we address the difficulties in mutual knowledge creation which we encounter and, in particular, on the way in which we use the concept of 'resistance to change'. If we accept that cross-cultural knowledge transfer is indeed a dialectic in which meanings must be collaboratively created, then the terms of the dialogue are worth examining.

There is clearly an issue of power to be considered. In the 'export sales' metaphor, though the issue of power differentials is, in principle, an open one, in practice the relationship between donor and consumer is frequently resolved to the consumer's disadvantage, as Bourdieu has pointed out:

> 'Misunderstandings, borrowings removed from their context and reinterpreted, admiring initiation and disdainful aloofness– these are all signs familiar to specialists on the situations that arise when cultures meetÉ any action for the handing on of a culture necessarily implies an affirmation of the value of the culture imparted (and, correlatively, an implicit or explicit depreciation of other possible cultures).' Bourdieu (1971: 198).

In the 'new product development' metaphor, however, the potential equality of both parties is frequently prejudged: the change agent is legitimised as the party which has the 'correct' or 'appropriate' knowledge, and the indigenous party as the one whose uncertainty is to be resolved by the information involved. Thus, for example, Holden & Cooper (1994: 516) quote Aslund & Layard (1993) as accusing Russian managers of an extraordinary contempt for trade and business, coupled with a hubristic belief in their own business expertise, and a palpable ignorance of other countries; while perpetuating the problem themselves, by seeing it as one of language *deficiency* with respect to western experience, (Holden and Cooper 1994: 515), rather than as a matter of differences in what the two languages, English and Russian, are each capable of encoding in a form that would make for unproblematic translation.

Bourdieu is clear that he means 'depreciation', and not *'deprecation'*: his suggestion is that there is a mechanism operating, irrespective of the goodwill or intentions of the individual change agent, which has the effect of devaluing the currency of discourse between the two parties concerned. We can gain a better understanding of this mechanism involved when we examine the concept of 'resistance to change'.

Any basic text will provide an example; here, the popular undergraduate O.B. text, Hellriegel et al. (1995), instances the kind of presentation on which the western manager involved in a joint venture with a central European partner is likely to base his or her thinking about how knowledge can be transferred. The model expresses 'resistance to change' in terms of factors which are, in certain respects, biased. To take just three examples from the list shown in Table 1.

It is assumed that it is the change agent's perceptions that are necessarily accurate, and these are contrasted with the 'defensive' perceptions of the indigenous party: yet, when we examine the notion of perceptual defence outside of the psychology-laboratory context in which the defence mechanism has been researched, we find that the notion of a 'defensive' reaction is a construct which the change agent uses, not the indigenous party: an attribution of behavioural causes which may be professionally made, but which is in principle dependent on the perspective, motives, and intentions of the change agent as much as on the motivational state of the indigenous party. To speak of 'error' in the absence of independent data to that effect is an absurd oversimplification.

The personality factors implicated in 'resistance' are described in terms of the negative poles of the traits involved-- 'dogmatism', rather than 'dogmatism / liberalism'; 'dependency' rather than 'dependency / self-sufficiency'; 'low self-esteem' rather than 'low self-esteem / high self-esteem'-- in the absence of any empirical evidence that the client's behaviour is, indeed, predicated on the negative rather than the positive poles of the traits under consideration. The habits which contribute to 'resistance' are presented in terms of inadequate coping, or of an inappropriate attachment to comfort and security, rather than in terms of the deployment of available coping skills and the wish, present in every manager, to be able to forecast outcomes in conditions of uncertainty. Threats to power and influence are, similarly, discussed in terms which place the indigenous party at an automatic disadvantage: one could as easily justify 'resistance' by examining the extent to which the indigenous party feels the changes being advocated would leave him/her with insufficient authority to cope with increased responsibility. And so on, for all but the last three, 'organisational' factors which Hellriegel instances.

At one level, these factors are clearly important in understanding the variables and issues which must be understood if change interventions are to be appropriately designed, and they form an important part of any organisational diagnosis which a putative change agent would wish to conduct. At another, however, they are deeply value-laden and, although in some instances, (as for example in discussing the 'Perceptions' factor), Hellriegel cautions the reader against over-emphasising the importance of the factor (Hellriegel, et al. 1995: 662-663), by and large the examples quoted do not examine the reasons for 'resistance' from the point of view of the indigenous party.

Construing Differences for Effective Knowledge Transfer

It is indeed difficult to give the sheer difference of a different language its due, steeped as one is in one's own mother tongue! However, the constructivist authors such as Kelly (1991) and Rorty (1982), who acknowledge the existence of a 'real' phenomenal flow but insist that its reality is socially negotiated, provide us with the conceptual resources to handle such differences, so that we can move from a simple understanding of knowledge transfer as information transfer, to the more complex version which draws on what I have characterised by the 'new product development' metaphor. Kelly's notion of the personal construct, by which an individual ascribes meanings to phenomena, and his conceptualisation of the *Sociality process*, by which the individual can engage in role relationships with another only to the extent that s/he is successful in understanding and using the *other* person's constructs, while monitoring and understanding the differences in encoding which this reveals with respect to his or her own constructs, are particularly helpful in this regard.

Personal constructs are bipolar; in other words, they encode meaning in terms of an assertion-in-contrast-to an

Table 1 : The Terminology of 'Resistance to Change'

Factor	Examples	Alternative Examples
Perceptions	the perceptual error called perceptual defence	cognitive mechanisms
Personality	dogmatism dependency low self-esteem	liberalism - dogmatism self-sufficiency - dependency low self-esteem - high self-esteem
Habit	coping security	coping skills predictability
Threat to Power & Influence	disempowerment loss of control	unbalanced authority/responsibility levels degree of autonomy
Fear of the Unknown	anxiety/insecurity/fear	anticipated challenges to fundamental values
Economic Reasons	threat to economic security	feelings of justice and equity
Organisational Design	rigidity, hierarchy of authority	organisational structure
Organisational Culture	lack of flexibility; rigid socialisation	functionality of 'old' norms and behaviour given continuation of prior reward structures
Resource Limitations	lack of time, capital, skills	-
Fixed Investments	fixed assets, unmotivated or entrenched senior employees	-
Inter-organisational Agreements	contractual obligations	-

opposite. Kelly was not the first to make this crucial statement. (de Saussure 1983) makes it one of his central assumptions in his seminal analysis of language and meaning. The value of a word is:

> not determined merely by that concept or meaning for which it is a token. It must also be assessed against comparable values, by contrast with other words... not by what it contains but by what exists outside of it. de Saussure (1983:114).

And so, for example, one might express the particular meaning which 'HRD' has for one person in terms of 'HRD, in-contrast-to The Training Function'; for another, 'HRD, in-contrast-to OD'. One might examine the meaning which 'HRM' has for one person by speaking of 'HRM, in-contrast-to personnel administration', and for another person, 'HRM, in-contrast-to 'conventional line management responsibilities'. To talk simply of 'HRD' or 'HRM' is to be nonspecific about the exact meaning intended, and if they need to build shared meanings effectively, each party involved had better establish which contrast the other has in mind.

Much can be taken for granted within a single culture (though even here, the importance of 'understanding the other's position' in any situation of negotiation has always been recognised). Cross-culturally, though, the negotiation between two parties which results in knowledge transfer requires special care, to ensure that for every asserted term, the full construct (term-plus-contrast) is explored and identified– simply because different languages,

in encoding experience within different cultures, often use constructs which involve entirely different contrasts (according to Kelly; or different associations in general, according to de Saussure).

Two Perspectives on the Transfer of Knowledge about HRD to the Post-Command Economies

When we engage in teaching market-economic principles to managers of the post-com and economies, our power in the knowledge transfer relationship would appear to stem from our experience i what is arguably a more successful economic system than the one under which the managers whom we seek to influence gained their experience. A wide variety of authors, both western and indigenous, have indicated the reasons for the relative failure of the command economy: an absence of involvement in marketing, distribution, HRM/HRD, financial and strategic management activities at the level of the individual enterprise, together with an underdeveloped knowledge about these practices at any level, corporate or state-institutional (see, for example, Auerbach & Stone, 1991; Kozminski, 1992; 1993; Krysakowska-Budny & Jankowicz 1991; Ullman & Lewis 1996).

In the HRM/HRD field, human resourcing involved the annual negotiation of production targets, together with the maintenance of excess labour capacity to ensure that targets were over-fulfilled when parts and raw materials became available in what was a collapsing supply chain. Production planning systems based on statistically proficient models ignored the social and behavioural aspects of the production process. Since sales, distribution and marketing were not the responsibility of the individual organisation, only the production targets mattered, regardless of the escalating real costs involved; in the absence of competitive pressures, frequent upwards reporting was the only control mechanism available. In consequence, training was largely confined to technical, reporting, and safety procedures. Kozminski (1992) is one of many authors who have described the behavioural consequences observable in the command, and early post-command, organisations.

These are the kinds of behaviour which our efforts at knowledge transfer are designed to influence, and my main point is that our attempts to alter such behaviour, even when they restrict their scope to the knowledge and skills elements and disregard the motivational and values components, are likely to be a failure unless our efforts to negotiate new meanings with indigenous managers give full value to their constructs: to the explicit, and implicit or contrasting, poles involved. Table 2 summarises some of this behaviour and suggests that, coupled with the counter-productive and negative aspects which are obvious to the western observer, there are a number of contrasting positive aspects which western observers frequently ignore when making training interventions, precisely because they do not give the full constructs– the meanings as conveyed by the terms-and-their-opposites– their full value.

Rather than addressing the financial inefficiencies and motivational dysfunction of labour hoarding, for example, we might recognise the level of sophistication and coping skills developed as a result of such practices within the command economy. The kind of concealment which allows an enterprise to report targets comfortably achieved at 100%, or even "norms overfulfilled" at 120% level, using a previously hoarded 20% to 40% excess of labour resource, demands a high degree of negotiating and planning skill– to organise and amass the excess 20% - 40% of labour in the first place, and to mobilise it when the need arises. Not to mention the well-developed communication skills required to massage the figures when the output was, in reality and commonly so according to Kozminski (1992: 153), appreciably short of the figures reported. The clear evidence that such practices led to a lowering of standards and a habituated tolerance of mediocre results (see Kozminski, 1993 with respect to Poland; Buravoy & Lukacs, 1985 in the case of Hungary; and Artemyev & Turner, 1994 in the case of Russia), and the distaste which one might feel for the venality involved, should not detract us from recognising the level of skilled performance required.

While recognising the inadequacies of a purely Taylorist approach to production planning and control, and the motivational consequences with respect to the human resource, it is important to acknowledge the value of technical rationality and the skills involved. In valuing the development of supervisory and management practices which adopt a rational/calculative approach in situations of uncertainty (e.g. Copetas, 1993, Aslund and Layard, 1993, Eberwein and Tholen, 1997), it is also important to recognise the centrality of intuition and subjective judgement, especially in the more strategic management activities at Board level (see, for example, Garratt, 1987; Hisrich & Jankowicz, 1990; Isenberg, 1984; Kelly & Gennard, 1996), and acknowledge the likelihood that these particular intuitive skills were well developed among the managers during the command economy.

Equivalent comments can be made with respect of each item in Table 2; the point being that we are likely to be more effective in the ways in which we negotiate meanings with indigenous managers if we recognise what they are able to do well, as well as what they did badly, and this becomes easier when we predicate such recognition on an underlying skill. Handling the knowledge transfer activity means recognising the ways they construe their own behaviour- as Kelly's Sociality process suggests- collaborative management development then becomes a matter of

working with the skill, which can be positively or negatively, effectively or ineffectively deployed, rather than a matter of eliminating dysfunctional behaviour.

Perhaps the most valuable skill learnt by the manager in the command economy was a very high degree of conceptual sophistication: the realisation that there are many ways to handle an absurd system, coupled with a recognition that personal advancement depends on being able to communicate with colleagues in a network what is really required when their help is sought, even when the official system of the command economy makes it unwise to spell the details out explicitly. Writing during the early, Stalinist period, Milosz (1981) challenges simple-minded, western interpretations of behaviour in the command economy as follows:

> 'Writers of the peoples' democracies make use of an accepted style, terminology, and linguistic ritual. What is important is not what someone said but what he wanted to say, disguising his thought by removing a comma, inserting an 'and'... Unless one has lived there one cannot know how many titanic battles are being fought... a Pole, Czech, or Hungarian practised in the art of dissimulation smiles when he learns that someone in the emigration has called him a traitor... at the very moment when this traitor... is

Table 2 : The Behaviour of the Manager in the Command Economy, together with some Necessary Skills

Explicit Pole : Negative Aspect	Contrasting Pole :Positive Aspect	General Skill
concealing labour and material resources "massaging" production and financial reports	sophistication in annual budget negotiations where virement between headings is tolerated *probably none*	Focused coping skills
flight into inappropriate level of technical detail; neglect of social factors; irrelevant, expensive consultancy reports	decisions informed by technical rationality; efficient standard operating procedures	(Taylorist) Rationality
inaccuracy in situations of uncertainty avoidance of systematic monitoring & evaluation	sensitivity to situational factors drawing on extensive prior expertise and experience ability to justify "the big picture"	Intuitive skills
venality, corruption and bribery: "you scratch my back, I'll scratch yours"	ability to access helpful power-holders, in the knowledge that the relationship is mutually obligatory	Networking skills
illness, esp. psychosomatic inaction due to excess role ambiguity	tolerance, stamina and endurance tolerance of ambiguity	Stress-handling
sophistry and dissimulation, cynical "spin-doctoring"	openness to nuance in verbal and written expression; openness and willingness to reconstrue	Conceptual sophistication

> engaged in a match of philosophical chess on whose outcome the fate of fifteen laboratories or twenty ateliers depends.' Milosz (1981: 78-79).

When communication must be conducted at several levels, *disguising* a thought in order to communicate it more effectively represents a highly sophisticated level of skill: a skill practised very widely indeed, if one accepts the assertions outlined in Czarniawska (1986). The 'struggle for meaning', during which the Solidarity opposition and the state authorities vied to publicise their disparate interpretations of phrases which summarised differing values pertaining to common referent concepts was not simply a characteristic of the organisational culture of the 1980s, when the extent of the systemic change was being negotiated, but typified general culture during the command economy. This skill is likely to remain available, at least among the middle-aged and older management practitioners, in the post-command period. To teach a person like this negotiation skills, for example, by running the 'Prisoner's Dilemma' exercise, (and I have seen it done!), is to invite challenges, based on substantial mathematical/technical knowledge, to the over-simplicity of the payoff matrix on which this exercise depends, while ignoring the availability of substantial expertise in effective negotiation among the participants themselves.

In Conclusion: Bringing some Inferences Home

It should be pointed out that this argument ignores the importance of social norms and personal values in knowledge transfer, and focuses on the admittedly simpler issues which arise when knowledge and skills are being 'transferred'. As Arbnor & Bjerke (1997) have remarked, the problems which arise when we seek to reconcile different viewpoints stem primarily from incompatibilities in personal epistemologies- beliefs about what constitutes worthwhile knowledge and how to recognise when this has been mutually created, rather from contending subject-matter content (knowledge) or how such knowledge is deployed (skills). Nevertheless, if we confine discussion to these simpler matters, perhaps the lessons for our own debates over knowledge transfer and resistance to change, here in the US and UK and across the rather more permeable boundaries which separate us, may be more clearly discerned.

Firstly, the idea that 'transfer' is a misnomer, and 'mutual creation' based on the negotiation of new understandings is a more accurate description, suggests the importance of involving the trainees, with their existing personal conceptual systems, in designing teaching strategies. If teaching strategy differs from learning strategy in incorporating a model of the transfer process as well as a description of what each party, change agent and learner, must do for learning to occur, then that model should be open to negotiation and mutual development. I am not sure to what extent our existing prescriptions for collaborative learning, in which we seek to develop 'a learning community in the classroom' (Novak 1990), allow for such involvement: at best, the approach and subject-matter to be taught are negotiated, with client involvement, at the initial contracting stage when the course in question is first mooted, but the participants themselves are rarely included in such discussions, nor are the discussions seen as an integral part of the learning process itself. Revan's Action Learning (Revans 1982; 1983), with its role of set facilitator as a co-equal with the members of the learning set, comes nearest to the collaborative involvement I have in mind.

Secondly, the idea that the learner can have very good reasons for engaging in behaviour one might otherwise call 'resistance to change' suggests that what change agents must do is *understand*, rather than 'overcome' it. This understanding can only occur when change agents work from the learner's perspective rather than their own and, to do so, the learner needs opportunities to define his or her own terms in negotiation with the change agent, since the constructs a person typically uses (the assertions-and-contrasts in which his or her meanings are expressed) are rarely self-evident.

It could be argued that much of our western work in organisational training (especially in O.D. in the Beckhard (1967) and Harrison (1970) experiential tradition), does just this. However, interventions of these kinds are characteristic of activities in which a measure of personal development is concerned: in which changes of attitude and values are involved. I am arguing that any learning situation, even when the objectives are confined to relatively simple changes in knowledge, skills and procedures, requires just this sort of analysis if enduring behavioural changes are intended. An alternative way of saying this could be that any intervention in which behavioural changes are to be enduring involves inseparable attitudinal and value components, and that we tend to ignore these: the rich literature on job analysis for training purposes, and on intervention design, rarely addresses the construing of the intended participants themselves, though there are a few exceptions, e.g. Jankowicz (1990); Smith (1980); Stewart & Stewart (1982), to be found.

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The Impact of Human Resource Development on the Winter War Between Finland and the Soviet Union, 1939-1940

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This study examines human resource development (HRD) activities that impacted the performance of the Finnish army in the 1939-40 Winter War with the Soviet Union. The analysis of those activities is based on a model that accounts for the various HRD elements, as well as for outside forces that affected the conduct of the war.

Keywords: Finland, Soviet Union

The Winter War between Finland and the Soviet Union took place nearly a half century ago, yet the valor and ingenuity of the Finns continue to amaze the world. This war had its genesis in the non-aggression pact between Stalin and Hitler in August, 1939, that allocated Estonia, Latvia, Lithuania, and Finland to the Soviet sphere of influence. Many attempts were made by the Soviet Union to negotiate the exchange of underdeveloped land in Soviet Karelia for Finnish land that lay a mere 32 kilometres from Leningrad. Unlike the Baltic states, Finland resisted these territorial demands. In frustration, Soviet Foreign Minister Molotov said, "We civilians can't seem to do any more. Now it seems up to the military. It is their turn to speak" (Engle and Paananen, 1973, p. 12). At that time, the German blitzkrieg that had quickly shattered Polish resistance was foremost in the minds of Soviet commissars, who envisaged mounting a similar offensive against Finland. Soviet Commissar Kulik stated sternly to Marshal Voroniv, "You are ordered to base all your estimates on the assumption that the operation will last twelve days" (Voronov, 1963, pp. 136-37). Actually, the Winter War lasted 105 days and featured some of the toughest military campaigns ever waged between a small nation, Finland with a population of less than four million, and the Soviet Union, with a population of 168 million. Similarly, Finland's regular army of almost 30,000, supplemented by trained reserves of nearly 281,000, was vastly outnumbered by a Soviet army of 3 million, supplemented by trained reserves of 16.5 million. When a peace treaty was finally signed on March 13, 1940, the astonishing fact emerged that Finnish losses totalled 25,000 dead and 55,000 wounded, compared with Soviet losses estimated by Finns at "175,000-200,000 dead and 300,000 wounded" (Chew, 1971, p. 212). The reason underlying this discrepancy will become evident later in this paper.

Although the valiant efforts of the undermanned Finnish army has been studied extensively, little attention has been paid to the human resource development (HRD) and organizational ideology efforts that laid the groundwork for Finland's performance in the Winter War. The factors that impacted these efforts are set forth in a model that appears as Figure 1. An important political issue was the Soviet desire, mentioned earlier, for a buffer zone, to be appropriated from Finnish territory, for the defense of Leningrad. Another political issue was the Finnish desire to remain an independent nation, instead of becoming a Soviet state. As for financial issues, the Finns had not allocated sufficient resources for weaponry, because they had not anticipated this challenge to their frontier. The size of the country was an important factor, because it made possible the rapid mobilization and deployment of defense forces.

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Figure 1: Factors effecting on the results of the war.

[1]the definition of HRD is by Gilley & al. 1989
[2]the definition of Organizational Ideology is by King, 1994

The second part of the model shows the elements within the military forces that included HRD, organizational ideology, and resources. Other factors, such as weather conditions and geography, played an important role in planning tactics, strategies, and battles, and therefore the results of the war. The HRD aspect of the Finnish army focused primarily on the pre-service training of enlisted men, non-commissioned officers, and officers. The training of these military forces began in 1919 with Finland's independence from Russia. From 1919 to 1939, every healthy male served in the army. Enlisted men served twelve months, and officers served eighteen months. In addition, reservists in various communities, under the leadership of non-commissioned and reserve officers, could attend 40-60 day refresher courses. In many cases, these officers were better leaders than the regular permanent officers because of their field experience with their local reserve units (Halsti, 1955; Laine, 1987). The strength of the Finnish army reserve units was greatly enhanced by the presence of 2,000 officers who had received their initial, rigorous training at Fieldmeister School near Hamburg, Germany, in their youth. As former members of the 27th Royal Prussian Battalion, they served under General Mannerheim in the 1918 Finnish civil war. In 1939, Field Marshal Mannerheim, appreciating their leadership potential, selected appropriate officers from this group for specific roles. These men became experts at waging guerrilla warfare. Special training to surmount the problems of fighting on difficult terrain became an important on-the-job learning experience. Engle and Paananen (1973) gave this account of the Finnish soldier:

> The Finns had been on skis from the time they had been small children. They had lived with and loved their wild country all their lives. Few had travelled more than a few miles from their birthplaces. As youngsters, they had played the game of "suunnistaminen," or orientation in the forest. School children were given a list of checkpoints within the woods where they were to make contact at a stated time. Hidden behind trees, instructors made sure that the young Finns reached their designated checkpoints. These northerners were experts at finding their way in the vast wilderness; their war tactics were based on the simple question, "Why go into an open field and get shot at, when you can have the protection of the forest?" (p. 84).

The Home guard, a voluntary organization comparable to our state National Guard units, sponsored such peacetime activities as rifle and ski competitions. Chen (1971) reported that "an average of 80,000 to 100,000 members participated in its training programs" (p. 27). However, the overall training of the Finnish army in the 1930s concentrated more on service and maintenance of such border defenses as the Mannerheim Line -- the Finnish equivalent of the French Maginot Line – than on weaponry. Fortunately, individual soldiers were well-prepared to live, fight, and survive under severe winter forest conditions, as their civilian work had been closely related to nature on the farms and in the forests. Often their leisure-time pursuits included hunting and skiing, two activities that taught them skills that served them well in the Winter War. The Finnish troops on the northern front were capable of skiing 20 to 30 miles prior to an engagement with Soviet troops and could withstand temperatures as low as 50 below (Halsti, 1955; Lane, 1987). In analyzing the situation prior to that war, Field Marshal Mannerheim noted:

> To a large extent, our defensive struggle commenced under more favorable conditions than we had dared to expect. The nightmare of the General Staff during the past 20 years had been the problem of how weak our covering troops would be to hold the gate to the Karelian Isthmus until the main forces of the field army had occupied the position....During the period of four to six weeks, we had been enabled to complete the training and equipment of troops to make them familiar with the country, to continue to build fortifications, to prepare work destruction, and to lay mines and mine-fields. The homogeneity of units thus become very different from what is usually the case with hastily mobilized troops immediately thrown into battle. These circumstances were calculated to produce confidence before the trials in front of us (Chen, 1971, p. 26).

The remainder of the training was two-fold. Soldiers were encouraged to use their expertise learned as skiers to make wide circles through the wilderness, attacking the Soviets from the sides and the rear, usually under the cover of darkness, storms, or fog. Their expertise gave to those operations the flexibility so necessary to the conduct of guerrilla warfare.

The other aspect of training was on-the-job expertise designed to teach soldiers how to disable Soviet tank columns. This expertise involved crawling to Soviet tanks with TNT charges or climbing the tanks and using Molotov cocktails. These were bottles filled with kerosene, tar, and gasoline. The Finns hurtled these blazing bottles into the open hatches of the first Soviet tank in a column. The disabled tank brought the Soviet convoy to a halt, enabling the Finns to carry out the second strategy called "motti." Motti involved killing enemy crews as they fled from the disabled tank and also the killing infantry troops following this tank. The Finns then attacked the stalled second tank and continued chopping off segments of the column.

As for career development shown in the model, obviously little such development could occur in a short, 105-day war. However, certain leadership qualities emerged during this defensive guerrilla war, and Finnish soldiers who displayed those qualities were rewarded by promotions.

Concerning organizational development, the Finnish army was blessed by the leadership of Field Marshal Mannerheim, who had had wide experience with the Czar's army. He understood the Soviet mind, and he knew the weakness of the Soviet army following Stalin's purge in 1938 of leading professional officers. As a result, Soviet troops came under the command of Soviet commissars, instead of military men, at the beginning of the war. The weakness of the Soviet army not only emboldened the Finns but had a dramatic effect on their performance in battling the Soviet army. Largely because of weak Soviet leadership, the Finns easily destroyed Soviet forces and equipment and amassed a large amount of Soviet weaponry to supplement their own scanty supply.

Organization ideology was defined by King (1994) as commitment, value congruence, and loyalty. The Finnish soldiers' commitment to battle could be summed up by the word "sisu," meaning tenacity of purpose, intestinal fortitude, or simply "guts." The great Finnish Olympic runner, Paavo Nurmi, said, "Sisu makes men do the impossible...it comes miraculously in times of stress (Strode, 1952, p. 410). Value congruence grew out of Finland's fierce desire to remain independent, not to surrender as had the three Baltic states under the pressure of the Soviet advance. The quality of loyalty was greatly strengthened by Stalin's avowed intention to organize a puppet Finnish state after the presumed Soviet victory. This plan infuriated the Finns and caused the Red Finns and White Finns, who had been foes in the civil war, to unite against the common enemy.

The third element within the military forces was resources. The outbreak of the war found Finnish troops out numbered three to one by Soviets troops, 80 to one by tanks, five to one by guns and mortars, and 50 to one by aircraft. The Finns had expected military assistance from Britain, France, Sweden, and the United States, but it was not forthcoming. However, the Finns salvaged quantities of guns, ammunition, and food from defeated Soviet forces. One Finnish army officer commented that the best equipment and ammunition that the Finns had came from the Soviets. As for human resources, the Finns had an enormous advantage in that the enlisted men and officers

knew each other well, because they had lived, worked, and bonded in the same geographic areas in their civilian days. This experience created an esprit de corps that proved invaluable in battle and a talent for small unit tactics so vital to guerrilla warfare.

Other resources included clothing and food. The Finns, accustomed to frigid temperatures, were sensibly clad in layers of clothing under a white covering that provided an effective camouflage amid the snow. The Soviets, anticipating a brief war, wore lightweight olive brown tunics. For the same reason, the Soviets were poorly supplied with food, a situation exacerbated by fierce Finnish tactics that destroyed Soviet field kitchens and further weakened a demoralized enemy.

Other related factors, as shown in the model, were weather conditions. The winter of 1939-40 was the second coldest in history. As a result, a large amount of Soviet motorized equipment froze, making the stalled vehicles excellent targets for the Finnish ski troops. Geographic conditions, such as dense forests, lack of roads, rugged terrain, and innumerable lakes, combined with weather conditions, enabled the Finns to wipe out two major Soviet units.

Despite the valiant efforts of the Finns and, in particular, their single-battle victories, they had to sue for peace when Stalin, embarrassed by Soviet defeats, appointed a regular general to command hundreds of thousands of Soviet troops against the exhausted Finns. Thus ended a noble period in Finnish history.

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Designing Effective Training Program for International Transfer

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In an effort to examine the effect of training design on the transfer of HRD training for a global company, a training project for a Korean organization was studied. Applying a conceptual model of international transfer of training, ten case studies were conducted. Data analysis results revealed several reasons of high or low learning and transfer of training. Training design issues for effective transfer were discussed.

Keywords: Training Design, International, Training Transfer

In the age of turbulence and pressures of continuing change, today's organizations are facing severe competition from around the world. In this global environment, organizations are encountering globalization of its employees as well as the business itself. This trend impacts employee training and development to cope with the global needs of employee performance. The change toward a more global orientation for employee training necessitates the need to understand the nature of learning and training transfer between organizations and countries. Despite the critical influence of transfer on the success of a business, many training initiatives of multinational organizations fail to meet the cultural and organizational needs of recipient organizations in multicultural settings (Lim & Wentling, 1998). Designing a global training program that accommodates the cultural and organizational needs becomes a critical task for HRD professionals in today's organizations.

Several theoretical and practical reasons initiated the need for the study. First, numerous empirical transfer of training studies have been conducted in recent years (Baldwin & Ford, 1988; Ford & Weissbein, 1997), but seldom in cross-cultural settings. Moreover, current theories and models of transfer of training were also considered inappropriate to study the nature of learning and transfer of training in cross-cultural environment (Lim & Wentling, 1998). Considering the impact of globalization on training, the need to set up a model for the cross-cultural transfer of training is growing more than ever. Through the model, the factors in training design, organization, and cultural differences affecting the transfer of training can be examined and verified in cross-cultural environment. From a practical point of view, HRD practitioners in multinational companies need guidelines to better understand the transfer of training within a global context. The findings of this kind of study will help program designers within multinational companies develop overseas training programs that better meet organizational and individual needs and are culturally appropriate.

Questions for Investigation

The purpose of this study was to examine the degree of learning and training transfer made by HRD professionals of SK Group in Korea and to identify what factors in training design affect the learning and transfer of training. Following research questions were developed to investigate the purpose of the study:

1. To what extent do trainees perceive their learning has resulted from training?
2. To what extent do trainees perceive their learning has transferred to their jobs?
3. What are the reasons of high or low perceived learning and training transfer?
4. What factors in training design affect trainee's learning and transfer of training to the job?

Theoretical Framework

In order to investigate the transfer of training across international settings, a theoretical framework for training transfer was developed. This framework was derived from an extensive literature review on training transfer, which resulted in a model of international training transfer and the identification of critical training design variables that may influence transfer.

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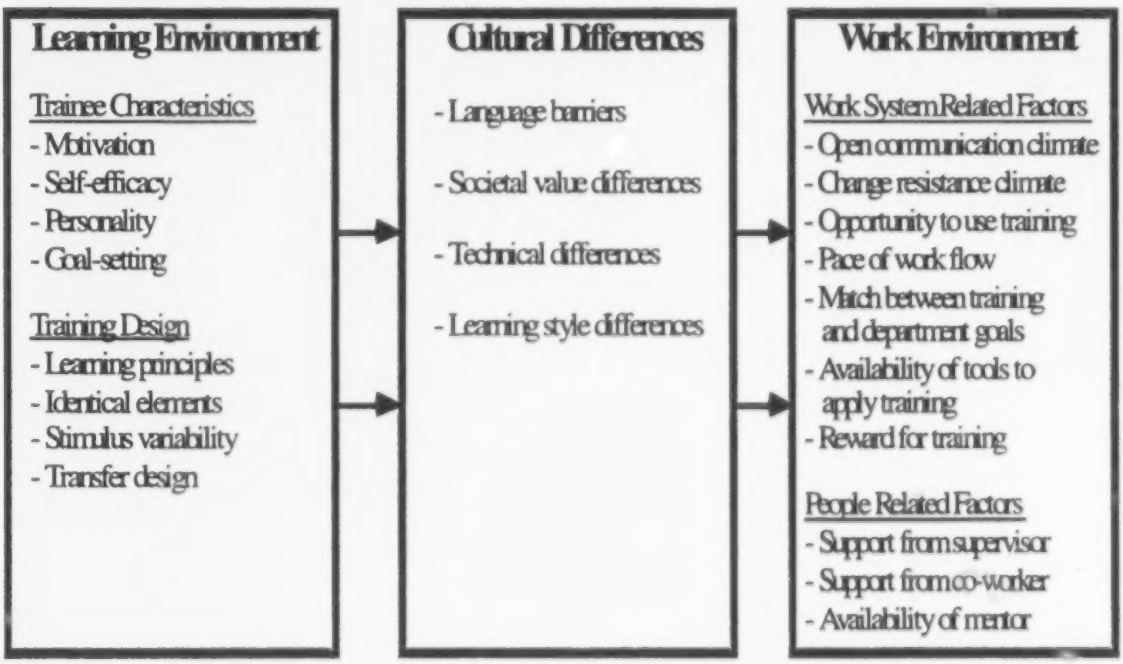
A Model of International Transfer of Training

Several researchers have developed theoretical frameworks to investigate the transfer of training domestically and internationally. Based on a careful review of several models of training transfer and international training transfer (Baldwin & Ford, 1988; Geilen, 1996; Huczynski & Lewis, 1980; Lim & Wentling, 1998), common characteristics for a model of international transfer were identified (see Figure 1). First, a model of international training transfer must encompass three primary domains: learning environment, cultural environment, and work environment. Second, the three domains of the model include several sub-elements or variables that can affect transfer of training. Third, the three domains and sub-elements interact with each other by shaping a specific pattern of influence on the transfer process. Fourth, the model of training transfer describes a systematic process that has direct or indirect relationships between the elements of each domain.

Figure 1. A model of international transfer of training.



Among the three domains of the Model of International Transfer of Training, the effect of training design on transfer of training has been studied by numerous researchers because it is believed to be one of the most important constructs impacting training transfer (Brinkerhoff & Gill, 1992). The training design variables can be categorized into two domains: instructional design and instructional method.

For instructional design, Baldwin and Ford (1988) describe three instructional design issues that impact training transfer: identical elements, stimulus variability, and teaching of general principles. According to them, transfer of training is maximized; 1) when there are identical stimulus and response elements in the training and transfer settings; 2) when a variety of relevant training stimuli are employed in the training content; and 3) when trainees are taught the general rules and theoretical principles that underlie the training content.

Many researchers have studied the effect of various types of instructional methods on training transfer. Overlearning, a process of learning far beyond the required level of performance, supports retention of training (Hagman & Rose, 1983). Post-training interventions such as goal setting (Wexley & Nemeroff, 1975) has been shown to increase the motivation of trainees to transfer learned skills to the job. Garavalia (1993) suggests several instructional methods for effective training transfer: (a) use of many different examples in various contexts, (b) use of analogies, (c) use of computer simulation, and (d) use of advance organizers. As an effective way to increase transfer of training, Foxon (1997) advocates the action planning method for training. Finally, tutoring and coaching

are considered powerful tools to polish new behaviors and skills acquired in the training (Huczynski, 1989).

In this study, the researcher applied the framework of the Model of International Transfer of Training to verify the degree of learning, transfer, and reasons of high or low transfer in global context. Among the three domains, this study examined the construct in training design.

Methodology

To explore the transfer of training, a recent training project for a Korean organization, SK Group, was studied. SK Group is one of the largest conglomerates in Korea; ranked as the fifth largest in Korea in terms of sale revenue in 1997. Fifteen companies in various product lines comprise the conglomerate.

In the study, ten individual case studies were planned and conducted. Case study design for data collection and analysis was used because each trainee was expected to have a different pattern of training transfer. The subjects for the study included ten HRD practitioners of SK Group in Korea who attended an HRD training program offered by the Department of Human Resource Education at the University of Illinois at Urbana-Champaign. The ten trainees came from four companies of SK Group and their job titles included HRD specialists, assistant manager, and manager.

A questionnaire was developed to obtain the trainees' perceived degree of learning and training transfer. The questionnaire included question items composed of the seventy training objectives extracted from the instructors' lesson plans that were used during the instruction. The question items used a four point Likert-type scale to measure the degree of the learning and transfer. A structured interview guide was developed to investigate the reasons for high or low learning and transfer and to collect examples of successful transfer. To evaluate the content and construct validity of the instruments, a pilot test was conducted.

Interviews, questionnaires, observations, and document review were utilized to obtain data for this study. Each trainee was asked to participate in two interviews for data collection. The reason for using the two-tiered interview process was because the trainees were expected to refresh their learning from the first interviews and provide more in depth information during the second interviews. The questionnaire was used during the first interview to determine each trainee's degree of learning and training transfer for each of the 70 training objectives. Responses from the questionnaire were used during the second interview to guide questions asking for reasons to explain the high or low learning and training transfer for each training objective. Data collection began six months after the training program ended. The researcher conducted all individual interviews with each subject in Korea.

Two methods were used for data analysis: basic descriptive statistics and qualitative analysis. The units of analysis for the descriptive case studies were: (1) the trainees' perceived degree of learning, (2) their perceived degree of training transfer, and (3) the reasons why learning and the later transfer of their learning to their jobs did or did not occur. The degree of learning and training transfer was first analyzed using basic descriptive statistics. The reasons for high or low perceived learning and training transfer for each training objective were explored and categorized. Document review and observations were conducted to collect data regarding incidents and examples made by the trainees on the job.

The Training Program

SK Training Center, the centralized training center for all employees of SK Group, implemented various overseas training programs to develop the HRD professionals from each company within SK Group. The Performance Improvement Technology Training Program was designed by the University of Illinois to provide SK HRD practitioners with knowledge and skills in the area of computer technologies for training. The training program was conducted for three weeks in August, 1997. The general objectives of the training program were to identify and describe technologies that enhance learning, develop quality instructional materials and evaluate them, and effectively use a variety of technologies for instruction and administrative purposes.

Instructional emphasis in the course was placed on recent developments that involve the use of the Internet and its application in education and training. Instructional technologies such as computer-based instruction, computer-based testing, distance learning, and intelligent instructional technologies were included in the curriculum. Instructional methods used for the training program were lecture, reading, discussion, projects, benchmarking field trips, and computer skill practice. A total of 70 specific learning objectives were developed for the course.

Findings

Degree of Learning

In order to identify what was learned or not learned during the course, the trainees were asked to rate their degree of learning for each of the 70 learning objectives in the course. As a group, the ten trainees indicated a fairly high perceived degree of learning. The population mean score for the perceived degree of learning was 2.0 on a 4 point scale (scale range was 0 to 3), which indicates "mostly understood" in the rating scale of the questionnaire. Further analysis was conducted to examine the degree of perceived learning within different goals of the course. The course learning objectives were categorized into four domains: learning principles and theories (18 objectives), conceptual understanding of performance improvement technologies (30 objectives), specific knowledge to master skills for distance learning technologies (11 objectives), and skills for using distance learning technologies (11 objectives). Table 1 shows the average perceived degree of learning for each category. As shown in Table 1, the trainees perceived greater learning for objectives that addressed skill development and conceptual understanding. Slightly lower learning was perceived for objectives that addressed theories and skill oriented knowledge.

Table 1
Average Perceived Learning Based on Training Objectives

Learning Objective Domains	Number of Objectives	Mean	SD
Learning principles and theories	18	1.90	.66
Conceptual understanding of performance improvement technologies	30	2.06	.70
Specific knowledge to master skills for distance learning technologies	11	1.86	.82
Skills for distance learning technologies	11	2.14	.71
Total	70	2.00	.72

Analysis was also conducted to examine the extent to which the trainees felt that certain objectives promoted either a high or low degree of learning. Sixty-three of the 70 objectives were rated above the midpoint on the 4 point scale (>1.5) while 7 of the objectives were rated below the scale midpoint. On the 4 point scale, 0 indicates "didn't learn" while 4 indicates "completely learn." During the second interviews the trainees were asked to provide reasons why certain objectives had resulted in either a high or low degree of learning. Table 2 contains a list of the factors that contributed to their learning.

Transfer of Learning

An analysis of the degree of transfer was conducted through interviews with the trainees and by reviewing documented evidence of transfer. The trainees seemed to have many chances to transfer what they had learned through the training to their jobs and tasks. The average of the ten trainees' perceived degree of training transfer for the 70 learning objectives was 1.61, which indicates a moderate degree of perceived transfer. The group's perceived degree of transfer was somewhat lower than their perceived degree of learning. Table 3 shows the average perceived degree of transfer for the four categories of learning objectives. It is interesting to note that the trainees felt that they had the greatest transfer of objectives that addressed learning theories and conceptual understanding of performance improvement technologies. This seems counter to the general notion that specific skills are most likely to transfer.

Table 2
Most Common Reasons for High or Low Perceived Learning

Reasons for High Degree of Learning	*f* [a]	% [b]
• Highly related to their job	143	21.9
• Previous understanding or knowledge	141	21.6
• Quality of examples and demonstrations	77	11.8
• Opportunity to apply on the job	65	9.9
Reasons for Low Degree of Learning	***f*** [a]	**%** [b]
• Forgetting due to the time lapse	76	44.4
• Lack of interest in the topic	54	31.6
• Lack of understanding during the training	30	17.6

Note. [a] indicates the number of times this reason was provided for each of the objectives that the trainee indicated had resulted in either a high or low degree of learning. [b] percentage of responses based on 63 high learning objectives and 7 low learning objectives.

Table 3
Average Perceived Transfer Based on Training Objectives

Learning Objective Domains	Number of Objectives	Mean	SD
Learning principles and theories	18	1.71	.89
Conceptual understanding of performance improvement technologies	30	1.67	.95
Specific knowledge to master skills for distance learning technologies	11	1.37	1.01
Skills for distance learning technologies	11	1.52	1.08
Total	70	1.61	.97

Evidence of the transfer of training was found during the first interviews. Five trainees said that began using some of the performance improvement technologies presented during the training when they returned to their jobs. Seven trainees indicated that they intended to apply what they learned from the training to their future jobs and tasks.

Although the trainees felt that transfer of learning had occurred, it was not always an easy transfer. Five trainees said that some of the conceptual objectives from the training were difficult for them to transfer while six

trainees said that some of the skills they had learned during the training were hard to transfer. During the second interviews, the trainees were asked to provide reasons why some of the objectives transferred while others did not. Table 4 provides a summary of the most common reasons why transfer did or did not occur. The primary reasons for high perceived degree of transfer was (1) the opportunity to use their learning on their job (77%), (2) needed for personal use (14%), and (3) used what was learned to persuade others (5%). The trainees provided numerous examples to explain the opportunities they had to use what was learned on their jobs. These examples included (1) for planning and discussion purposes (28%), for program development (14%), for information system design (13%), and for instruction (11%). The most common reasons for low transfer included (1) the lack of opportunity to apply the learning on the job (64%), (2) no direct relationship of the learning with their job (15%), and (3) lack of understanding of the content (9%).

Table 4
Reasons for High or Low Perceived Transfer

Reasons for High Transfer	*f* [a]	% [b]
• Opportunity to use on the job	325	77.4
• Used for personal use	60	14.29
• Used to persuade others	20	4.76
Reasons Low Transfer	***f*** [a]	**%** [b]
• Lack of opportunity to apply on the job	270	64.3
• Not directly related to my job	63	15.0
• Lack of understanding of the content	39	9.3

Note. [a] indicates the number of times this reason was provided for each of the objectives that the trainee indicated had resulted in either a high or low degree of transfer. [b] percentage of responses based on 39 high learning objectives and 31 low learning objectives.

Training Design

In this research study several characteristics of the design of the training program affected the trainees' learning and transfer of training directly or indirectly. From the trainees' comments about the training design, the inhibiting and promoting factors of training design on the learning and training transfer were identified. The number in parenthesis is frequency of response from the trainees. The inhibiting training design factors identified were: inappropriate benchmarking field trips (4), lack of sufficient time to preview the training content (2), lack of thorough needs assessment for each trainee (1), insufficient practice and exercise session (1), mismatch between the practice session and the learning content (1), inappropriate grouping of trainees for workshop activities (1), lack of clarification of technical terminology (1), and insufficient lab hours for computer use (1). The promoting training design factors identified were: instructor's mental and emotional involvement in the instruction (3), instructor's demonstration of teaching principles through the instruction (2), demonstration of specific examples (2), self directed daily wrap up meeting (2), instructor's sensitiveness to cultural differences of the trainees (1), step by step instruction moving from basic to advanced learning content (1), skill practice session (1), teaming up of work group with mixed specialties (1), pre-distribution of reading materials (1), participatory learning method (1), and use of audio and visual material during instruction (1)

Even though it was not specifically indicated at the above list of training design factors, the role of training coordinator was indicated as an important factor for the success of the training. Coordination was especially required, not only for translating the instruction during class, but for guiding the trainees with appropriate suggestions during the daily wrap up meeting regarding the application of their learning to jobs and tasks. To do

this, the coordinator needed to understand the trainees' jobs and work environment.

The self-directed wrap up meeting seemed to help the trainees in several ways. First, it provided the trainees an opportunity to reflect daily learning and relate the learning to jobs and tasks. Second, several trainees mentioned that the daily wrap up meetings helped them clarify some of the confusing concepts of performance improvement technology. Third, the wrap up meetings also helped novice trainees in computer technology understand basic technical concepts and network terminology. Whenever a trainee raised a technical question to the whole group during the meeting, one of the computer specialists answered the question.

Discussion

Several themes emerged from the data analysis of perceived learning and transfer and the examination of actual examples of transfer. These themes and their resultant implications are organized around degree of learning, training transfer, and training design.

Degree of Learning

The ten trainees who participated in the performance improvement technologies training program showed different perceived degrees of learning and training transfer from the data analysis. In general, all ten trainees showed a high perceived degree of learning. From the responses of all ten trainees, one pattern of learning were found. Even though the perceived degree of learning for all trainees was satisfactory, the training objectives in the conceptual domain seemed to be relatively more difficult to learn than skill-related training objectives. Among the seven training objectives that showed low perceived degree of learning, only one was related to skill-related objectives while the other six objectives were conceptual.

There were numerous reasons for low or high perceived learning, but one distinct category was found to influence the learning to a great degree. It was the category of reasons related to job application of the training that accounted for most of the reasons for low perceived learning (i.e., forgetting due to lack of opportunity to use on the job) and for high perceived learning (i.e., highly related to my job and opportunity to apply on the job). From this finding, it seems that job related reasons had the strongest influence on learning. Other major reasons for low or high perceived learning were also found to influence the trainees' learning. Those reasons could be classified into two categories. The first category included the personal reasons for using what was learned such as lack of interest or previous understanding of the training content. The second category included training design aspects that account for high perceived learning such as examples and demonstration, practice opportunities, class projects, and daily wrap up meetings.

Transfer of Learning

The trainees seemed to have many chances to transfer the training objectives to their jobs and tasks, but they showed different perceived degrees of transfer among them. In general, transfer of training showed a relatively lower perceived degree than that of learning. It is indicated, however, that job related reasons had the greatest influence on training transfer. Of the reasons for low perceived transfer, job related reasons such as lack of opportunity to apply on the job or information that is not directly related to their job had the most influence on transfer. Of the reasons for high perceived transfer, job related reasons such as opportunity use on the job has the most influence.

In contrast to learning, conceptual related training objectives were perceived to be more highly transferred by the trainees than specific knowledge or skill related objectives. The training objectives covering "learning principles and theories" and "conceptual understanding of performance improvement technologies" were perceived as highly transferred objectives. Training objectives covering "specific knowledge to master skills for distance learning technologies" and "skills for distance learning technologies" were perceived to be less well transferred. The reasons for this could be based on the job characteristics of the trainees. As indicated from the reasons for high perceived transfer of training, the trainees were more engaged in tasks that required mental or conceptual activities than did in skill related tasks.

Training Design

From previous research studies, several training design variables were found to influence the transfer of

training such as identical elements between the learning and job setting, stimulus variability in instruction, teaching of general principles (Baldwin & Ford, 1988), and overlearning (Hagman & Rose, 1983). The findings of this study also showed similar evidence with these research studies. First, the training content was said to be mostly identical with the trainees job requirements except one technical difference in language conversion for a software program. Second, use of various instructional methods, such as examples and demonstration, practice session, and project completion, seemed to promote better learning during the training. Third, overlearning seemed to promote the retention of trainees' learning after the training. Many trainees seemed to remember the learning principles, which were emphasized several times by one instructor, six months after the training.

From the data analysis, 9 out of 10 trainees indicated that they had a project to complete after the training. One of the trainees even mentioned that the training program was successful because most of the trainees were assigned some types of projects to complete after the training. From this, the transfer variables such as motivation and goal-setting might be drawn not only from personal characteristics but also affect learning and training transfer as the training design factors.

Conclusion

Not all learning from any training program can be expected to be transferred or applied to jobs and tasks for the trainees. This is especially true for the case of international transfer of training. To assure the maximum transfer of a training program several considerations must be made prior to and during the training program. First, to make a good training design that accommodates the cross cultural training needs, thorough training needs assessment at the individual participant level seems important to ensure the success of training transfer as well as the quality of training. Good training needs assessment always improves the quality of a training design as well as delivery of the training. Second, the use of diverse instructional methods is considered an important strategy for training design that leads to successful training transfer. By providing learning experiences in different ways, the trainees can master the training content conceptually and experientially. Diverse learning stimuli also helps retention of the learning to a great degree. Third, in the case of delivering training programs for foreign students, the instructor's sensitivity to the cultural differences that students may experience during the instruction is an important factor for successful training. The course coordinator also plays a critical role in guiding the students' learning and application of the learning back to the jobs and tasks.

Several research implications surface from this study. First, it appeared that trainee personality variables influenced the learning and training transfer, but were not explored in this study. Including the variables of trainee characteristics in future research designs will enhance breadth of future studies. Second, this study focused on the transfer of training in international settings. Comparing the differences found in the transfer of training between domestic and international settings is an interesting topic in need of study. Third, studying the transfer of training in different training delivery environments, such as using distance education technologies, will be another way to study the transfer of training between countries.

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Cross Cultural Effectiveness: A Case Study of Cultural Conflict Incidents

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Rapid expansion of global business has challenged HRD to meet the needs of transnational leaders and global knowledge workers. The broad problem addressed by this study concerns the cross-cultural effectiveness of American expatriates living in the United Kingdom. It was concluded that the differences in cultural assumptions between the US and UK are greater than expected, and that provision of skill training in cross-cultural conflict resolution, cross-cultural communications, and coping resources for stress could address deficits identified by this study.

Keywords: Cross Cultural Effectiveness, Cross Cultural Conflict Resolution, Global Leadership Development

After they surveyed existing literature and current practice, Black, Mendenhall, & Oddou, (1991) referred to the literature on cross-cultural training for business purposes as "pre-paradigm" and recommended use of ethnographic research to expand the knowledge base. The research strategy for this study was case study. The purpose was to describe cross-cultural conflict incidents and to illuminate factors that may be affecting cross-cultural effectiveness.

Research Problem

International experience is fast becoming a career development prerequisite for executive management positions (Brewster, 1991). The need for effective use of knowledge and experience across borders accompanies the expansion of global business. Recent trends include the changing characteristics of potential expatriates. For example, the percentage of dual-career couples, who may be negatively impacted by an international assignment, is increasing steadily. It is estimated that dual career families will account for 63% of married couples in the US by 2000 (Employee Relocation Council, 1987). Expatriate female employees constitute a relatively small segment, estimated to range from 3-7% percent, at present. However, this group is viewed as the beginning of a new trend (Adler, 1994). Expatriates from third countries, who are neither host nationals or headquarters employees, are being used in a small but growing number of companies with a strategic approach to global managerial and organizational development. Additional trends in relation to expatriate turnover and attrition are emerging. A typical expatriate in the 1990s is expected to fulfill one or two international assignments (Brewster, 1991). This reality contrasts with the previous practice of using a cadre of career expatriates who were moved from country to country over a lifetime of employment. Attrition rates after an international assignment range as high as 40% within the first 2 years of reentry. Consequently, global HRD expertise is needed to retain employees who have gained valuable experience on international assignments. Clearly, the organizational benefits of global leadership development systems and international networks are becoming more apparent.

Research Questions.

The broad questions, which guided this study, included the following: How can HRD assist expatriates and accompanying family members in developing intercultural effectiveness? What can be learned about how to lessen culture shock and cross-cultural adjustment? How do skill and knowledge deficits influence cross-cultural conflict incidents and intercultural effectiveness? The multiple factors contributing to successful cross-cultural transition and effectiveness have not been clearly identified in previous literature. The focus questions that guided this study were as follows:

1. How do violated expectations play a role in culture conflict incidents between American expatriates and UK host nationals? (Burgoon, 1983)
2. How do expatriates exhibit cross-cultural skills, or lack thereof, in the resolution of cross-cultural conflict incidents? (Ferraro, 1990)

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3. What can be learned about the implications for social skills training from US-UK conflict incidents? (Furnham & Bochner, 1986)
4. What can be learned about the implications of cross-cultural stress and coping resources for stress in relation to resolving cultural conflict incidents? (Matheny, Curlette, Aycock, Pugh, & Taylor, 1987).

Research Design

The research strategy was case study. Descriptive data about their experiences were collected from 16 American expatriates in London, using structured interviews that encouraged story telling. Triangulation interviews were conducted with 10 British host nationals. Each semi-structured interview consisted of questions regarding cross-cultural conflict situations and how they were resolved. The subjects constituted a group purposefully selected as the unit of analysis. The present study represents a single case (a single unit of analysis) but the interviewing proceeded to saturation, that is, until conflict patterns were often repeated in the interviews. The unit of analysis provided a unique research opportunity. As the researcher, I was a US expatriate who lived and worked in the UK for six years. This provided an unusual mode of entry to interviews with expatriates (US citizens living in the UK) and with host nationals (British citizens working with Americans). The criteria for inclusion resulted in a group of new expatriates who were able to provide data rich with fresh impressions. In addition, I was able to include participants who are representative of future trends in expatriation: dual career expatriate couples, female expatriates, and male accompanying partners.

Preliminary Study

The researcher designed, developed, and presented a 3-day program entitled In-Country Cross-Cultural Transition Skills Training. The design phase included: 50 needs assessment interviews in the US, Belgium, England, and Germany; a review of cross-cultural training programs and of models useful for designing cross-cultural training; a review of the literature on cross-cultural training content and effectiveness; and a review of assessment instruments useful for cross-cultural training. The training was designed to meet the needs of expatriates and spouses during an international assignment. It was conducted on a pilot project basis in the United Kingdom in 1993. Because of the success of the pilot program, the researcher subsequently conducted the program on 12 other occasions in 3 other countries (Brussels, Belgium; Frankfurt, Germany; and Washington, DC) between 1993 and 1996. Since 1994, the In-Country Skills Program has been conducted in shorter versions (one-half to two days) in a number of different organizations. The 3-day skills program includes the following: Module 1: Culture, cultural assumptions, culture shock & adjustment; Module 2: Cross-cultural adaptability, managing transitions; Module 3: Cross-cultural clash, cross-cultural problem solving skills; Module 4: Cross-cultural communication skills and negotiating skills; Module 5: Cross-cultural stress and coping resources for stress.

Procedure. Qualitative analysis of the interviews employed pattern matching strategies to identify differences in cultural assumptions and their influence on cross-cultural conflict incidents and to identify how coping resources for stress may influence coping responses in US-UK conflict situations. Reviews by peers and British host nationals were used to validate and modify interpretations that emerged from the pattern analysis of the interview data. The following expected patterns were identified:

Expected Pattern 1. Cross-cultural conflict incidents between US expatriates and UK host nationals will include expectancy-violations. Expectancy-violation theory (Burgoon, 1983) focused on how violations of expectations about another person's behavior lead to positive or negative evaluations of that person. Expectancy violation theory is particularly applicable to cross-cultural conflict interactions.

Expected Pattern 2. Cultural distance will be a factor in the US-UK cross-cultural conflict incidents. Cultural distance is a theoretical perspective which posits that the more dissimilar a new culture is from one's home culture, the more difficult the adjustment will be during expatriation (Mendenhall & Oddou, 1985). This perspective is based on the assumption that if an expatriate is unable to identify or perform appropriate behaviors, adjustment will be more difficult. This pattern expectation was not intended to imply that the degree of cultural distance would be as great in American-British interactions as it would be, for example, in American-Chinese interactions. Instead, the cultural distance theory was expected to serve as a distraction from accurate expectations and anticipatory preparation, which is similar to the reentry transition expatriates experience upon return to their home culture (Black et al., 1991; Weaver, 1993)

Expected Pattern 3. The use of cross-cultural skills will have a positive impact on the resolution of cross-cultural conflict incidents. The pattern analysis will use Ferraro's (1990) taxonomy of cross-cultural skills, which includes: tolerating ambiguity, being flexible, having patience, displaying empathy, being resourceful, personalizing observations, showing respect, being non-judgmental, and having a sense of humor.

Expected Pattern 4. The use of coping resources for stress, as defined by the Coping Resources Inventory for Stress (Matheny, et al., 1987), will have a positive impact on the resolution of cross-cultural conflict incidents. The management of cross-cultural stress has been identified as a dimension of cross-cultural adaptation. Development of cross-cultural coping resources for stress may provide valuable tools for expatriates in cross-cultural conflict situations.

Analysis. Merriam (1988) stated, "qualitative researchers are interested in how people make sense of their lives, what they experience, how they interpret these experiences, how they structure their social world" (p. 19). Following the recommendation of Goetz and LeCompte (1984) the researcher organized the case data base and read all of the data several times. During multiple readings, the investigator made notes, comments and questions in the margins of the transcripts. This stage is vital because the initial notations allow the investigator to note the most striking information. This begins the process of organizing, abstracting, integrating and synthesizing that will lead to the researcher being able to communicate what has been observed.

The notes were then developed into an outline or system of classification into which the data was sorted. This outline aided the investigator in finding regularities and patterns. The patterns were then made into categories into which the subsequent items were sorted. The patterns or categories emerged from the data. Lincoln and Guba (1985) recommend using, "*units of information* that will, sooner or later, serve as the basis for defining categories" (p. 344). *Culture Clash Incident*, the unit of information chosen by the researcher, met the criteria for selection delineated by Lincoln and Guba (1985). A *Culture Clash Incident* was defined as an incident or scenario that is an example of cross-cultural differences or cross-cultural conflict between persons from different cultures. A culture clash incident often occurs as a result of perceived unmet expectations that are a result of differing cultural assumptions.

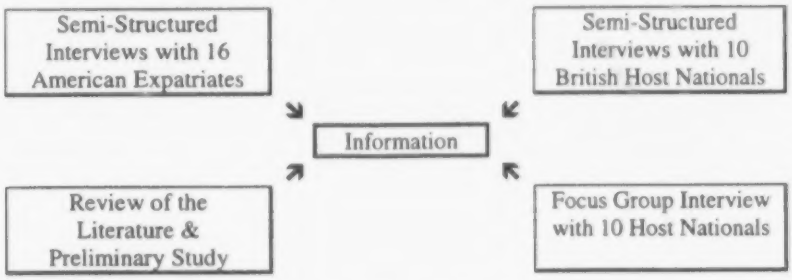
After the unit of information was identified, each interview transcript was read an additional six to eight times and a running log of culture clash incidents was created. The resulting Culture Clash Log that includes a total of 78 clash incidents was developed. Each conflict incident was then categorized in relation to broad cultural assumption continua. On the first pattern sorting, the researcher used classic anthropological continua from the seminal work, in 1961, of Florence Kluckhohn & Fred Strodtbeck: (1) *Man-nature orientation*, (2) *Time orientation*, (3) *Activity orientation*, (4) *Relational orientation*, and (5) *Nature of man orientation*.

In the first sorting, a number of culture clash incidents did not match the broad categories used by Kluckhohn & Strodbeck. This led to consideration of other possible explanations for the emerging patterns. Two more continua from research by an American anthropologist, E. T. Hall, matched the data from the pattern analysis and were added. These were *Sense of Space*, or *Proxemics*, and *High and Low context* in communication styles (Hall, 1976). Cultural Theory by a British social anthropologist, Mary Douglas, provided the frame of reference for two additional categories which emerged from the data: *Power and empowerment*, and *Social Relationships* (as cited in Kim & Ofori-Dankwa, 1995). Research by Noesjirwan (as cited in Furnham & Bockner, 1986) provided the structure for the category of *Social Interaction Values and Behaviors*. A final category that is unique to this study was defined as a continuum for *Trust and Safety Concerns*.

Validity and Reliability. Yin (1994) recommended three principles of data collection to maximize the benefits of using case study as a research strategy. Each of these principles has been incorporated into the design and implementation of this case study. The first, multiple sources of evidence, is presented in Figure 1. According to Yin (1994):

> [T]he most important advantage presented by using multiple sources of evidence is the development of converging lines of inquiry, a process of triangulation .... [A]ny finding or conclusion in a case study is likely to be much more convincing and accurate if it is based on several different sources of information, following a corroboratory mode. (p. 92)

Figure 1. Convergence of Multiple Sources of Evidence in a Single Case Study


Semi-Structured Interviews with 16 American Expatriates
Semi-Structured Interviews with 10 British Host Nationals
Information
Review of the Literature & Preliminary Study
Focus Group Interview with 10 Host Nationals

Since multiple sources of evidence essentially provide multiple measures of the same phenomenon, triangulation results and with it the potential problems of construct validity can be addressed. This study has employed: (a) multiple data sources (data triangulation); (b) multiple evaluators (investigator triangulation); and (c) application of multiple theories to the same data set (theory triangulation). The second quality principle recommended by Yin (1994) is to create a case study data base. This allows the data base to be the subject of a separate secondary and independent analysis of the case report by the original investigator. The data base for this study includes the following: (1) American expatriate interviews: Sixteen audio tapes (averaging one hour in length), hard-copy transcriptions of the interviews, and computer disk files of the transcriptions. (2) British national interviews: Written summaries of 10 British interviews compiled immediately after the interviews from field notes taken during the interviews. (3) British national focus group: (a) a summary of the written responses from 10 London university students to questions regarding the Coping Resources Inventory for Stress (CRIS); (b) a typed transcript of a focus group discussion held to solicit feedback regarding the cross-cultural interpretation of individualized reports on coping resources for stress. The third quality principle is to maintain a chain of evidence that allows an external observer to follow the derivation of any evidence from the initial research questions to the case study conclusions for increased reliability. This was accomplished by making use of citations to the relevant portions of the case study database, by ensuring that the database included actual evidence, and by ensuring a clear link between the content of the protocol and the initial study question (Yin, 1994).

Results and Findings

Qualitative analysis of the expatriate interviews employed pattern matching strategies to identify 78 cross-cultural conflict incidents which were grouped into 10 primary categories and 25 subcategories of US - UK cultural assumption differences. The validity of these categories was then subjected to peer analysis, US and UK participant review. The same strategy was used to match 30 British triangulation cultural conflict incidents to the ten primary categories. Methods used to accomplish interpersonal conflict resolution were then compared to a taxonomy of cross-cultural skills (Ferraro, 1990) and coping resources for stress (Matheny, et al., 1987). Table 1 (see Table 1) presents a model of the US and UK cultural assumptions evident in this case study. The culture conflict incidents were matched with accepted cultural orientation continua from the literature review. The values, beliefs and behaviors that emerged from the pattern analysis matched positions on the continua presented.

Conclusion 1.

Expectancy-violations played a major role in the cultural conflict incidents described by the participants. The quantity and quality of information gathered regarding US and UK cultural assumption differences exceeded expectations. When asked to describe a situation involving cross-cultural differences or cross-cultural conflict, the 16 participants provided descriptions of 78 cross-cultural conflict incidents. The vast majority had expectancy-violations as a central feature. The majority of expectancy-violations occurred during conflict incidents that took place between American expatriates and British providers of customer services or goods. The following pattern sequence was seen repeatedly. When an American expatriate described a problem situation to a British service provider, he or she expected to engage the service provider in a problem-solving effort until the issue was resolved. However, in most cases the British service provider was either not prepared or not empowered to participate in problem resolution with the customer. When the expatriate complaint was met with indifference, or inflexibility, or

referred to a higher level, the conflict between the sender and receiver either escalated or was left unresolved in the majority of culture clash incidents.

Conclusion 2.

The Cultural Distance theoretical perspective, in its entirety, was not supported by this study. US expatriates in the UK repeatedly experienced difficulties in identifying and performing culturally appropriate behaviors. Adjustment was therefore more difficult than expected. In addition, because difficulties were not anticipated (and culture distance was assumed to be minimal) the negative impact on the expatriate's adjustment was greater than anticipated. Recent work by Brewster (1994) on British and Swedish managers provides a foundation for what may develop into a rival theory to the Cultural Distance theory. Brewster (1994) summarized a 1971 study by Franko that empirically challenged cultural distance by showing that the US had the most failures in joint ventures with Canada and Ireland. In addition, Brewster reviewed studies of United States and Swedish interactions that have experienced problems despite having similarly developed cultures.

Table 1. US-UK Cultural Orientation Continua

US-UK Cultural Orientation Continua			
Orientation	**Basic Values, Beliefs & Behaviors**		
1. Social Interaction	Formal & Reserved	^ v	Informal & Extroverted
2. Sense of Time	Past Oriented	^ v	Future Oriented
3. Work Roles & Empowerment	Hierarchy Authoritarian	^ v	Flat Structures Democratic
4. Social Relationships	Ascribed Status	^ v	Achieved Status
5. Context	High Context	^ v	Low Context
6. Action Orientation	Being	^ v	Doing
7. Sense of Space	Internal Space	^ v	External Space
8. Relationship between Society & Individual	Group Oriented	^ v	Individualistic
9. Safety Needs Met; Trust Relationships	High Comfort Level and Trust	^ v	Low Comfort Level & Distrust
10. Control Over Nature & Ability to Change	Life is Unchangeable	^ v	Life is Changeable

Language difficulty is usually listed as the most significant barrier to cross-cultural communications during an international assignment. For example, it is easy to understand why a successful corporate executive expatriate might tend to isolate within the American or English speaking sub-culture. One of the strengths of this study was the common language of English. The researcher was able to analyze the cultural assumptions underlying the US and UK conflicts and to explore the subtle differences in cultural codes, rules, and context.

Conclusion 3. In the majority of cultural conflict incidents, cross-cultural skills were noticeably absent. In particular, lack of culture-specific knowledge about UK cultural assumptions was evident. In addition, there was a lack of self-awareness, on the part of the American expatriates, of their own cultural assumptions and personal value systems. The pattern analysis began with the use of Ferraro's (1990) taxonomy of cross-cultural skills. Although

concepts such as "having patience" are readily understood, these proved too broad for the analysis (i.e., these descriptions were not operationally defined to the extent needed to distinguish between the more effective resolution of conflicts and the less effective attempts.) A description of more specific or observable cross-cultural skills was needed to analyze the detail contained in the interview transcripts. Therefore, the Culture-Learning Social Skills Model was used and the expected pattern was restated to include specific cross-cultural skill or knowledge deficits and the resulting impact on cross-cultural conflict incidents.

The Social Skills Model considers learning the "salient characteristics of the new culture" to be the major task of the expatriate. In this approach, learning the behaviors of a new culture is not conceptualized as an adjustment process with ethnocentric overtones. Instead, it is an expedient process in which the expatriate adopts new behaviors on a temporary basis (Furnham & Bochner, 1986, p. 235). For example, a Briton living in Tokyo would quickly learn to abandon his or her habit of queuing for a subway or train. Specific, operational definitions of skill deficits are possible with this model. In the majority of the conflict incidents analyzed there was a lack of knowledge or a lack of cross-cultural skills on the part of the expatriate or the host national, or both. When a cross-cultural conflict was resolved or later understood, the acquisition of additional culture specific information, culture general knowledge, or cross-cultural skills was apparent in each of the explanations given by the expatriate.

Conclusion 4. The concepts underlying the Coping Resources Inventory for Stress (CRIS) scales provide a structure for the expatriate to evaluate cross-cultural clash situations from a different perspective and to make alterations or accommodations. In several conflict resolution descriptions the participants described the use of *cognitive restructuring*, in that they attempted to place a problem in a different perspective or to view a situation from the perspective of host national. This process is referred to in the cross-cultural literature as using empathy, isomorphic attribution, or an ethno-relative perspective (Bennett, 1993; Lewis, 1996; & Triandis, 1990). *Confidence*, another concept addressed by the CRIS, is described as "faith in one's ability to cope successfully with stressful life situations" (Curlette, Aycock, Matheny, Pugh, & Taylor, 1987). Persons, who score high on the confidence scale, believe in their ability and usually expect to succeed. Mendenhall and Oddou (1985) found that one of the primary individual factors relating to in-country adjustment was a *self-oriented skill* which was defined as the ability to believe in oneself and one's ability to deal effectively with the foreign surroundings, even in the face of great uncertainty. This *self-oriented skill* was found to be quite similar to what Bandura (1982) referred to as *self-efficacy*. In an international assignment, self-efficacy, or confidence, drives the person to persist in trying new behaviors which, in turn, facilitates adjustment. When asked, "Who was the hero, heroine, or positive force in the story?", a number of participants answered, "I was, because I persevered."

Limitations of the study. This study has focused on cross-cultural conflicts between two relatively similar cultures, the US and the UK. It has used a purposefully selected unit of analysis to examine critical theoretical propositions. While insights have emerged that may be helpful in other cross-cultural situations, no statistical generalization of the findings to other situations is implied.

The aim of this research design has been toward analytic generalization or Level Two Inferences. According to Yin (1994), this level of generalization is appropriate for a quality case study. Yin argued that researchers should use tactics throughout the design and implementation of a case study to apply the four tests commonly used to establish the quality of empirical social research: construct validity, internal validity, external validity, and reliability. These tactics were employed.

Implications for HRD and Summary

Because cultural distance is assumed to be minimal, expectancy violations are not anticipated and cross-cultural skill and knowledge deficits seem unlikely, cross-cultural skill training for US-UK interactions is rarely provided. Most of the interview participants were surprised by the degree of cultural difference experienced and few demonstrated the knowledge or the cross-cultural skill repertoire needed to manage cross-cultural conflict situations effectively. Several implications emerged from this study which warrant further research. They are presented as myths for the purpose of encouraging new questions about the pre-paradigm state, which currently exists in the area of cross-cultural preparation and effectiveness for business related expatriates.

Myth 1. When moving from one culture to another, it is less likely that an expatriate will experience culture shock or a period of cross-cultural adjustment if the two cultures are similar. This study suggests that it is more useful to examine cross-cultural adjustment in relation to expectancy violation rather than the degree of cultural distance or culture novelty . These findings match those of re-entry studies in which repatriates describe unexpected culture shock upon re-entry to their home culture. The pattern analysis revealed skill and knowledge deficits in 10 specific cultural assumption categories and 25 sub-categories. Perhaps subtle cultural differences that

are slowly discovered over time have as great an impact as obvious cultural differences that are quickly recognized. One of the interview participants used the phrase "it was as if we were speaking different languages;" another said, "I'm always standing on one foot -- never able to get my balance," to describe the impact of cultural differences between the US and the UK, two seemingly similar cultures. Adherence to the construct of cultural distance could be limiting research on the subtle interpersonal learning, which is a component of cross-cultural effectiveness.

Myth 2. Provision of pre-departure training is adequate preparation and support for the development of cross-cultural transition and cross-cultural effectiveness skills. This study challenges the belief that a pre-departure program is adequate for cross-cultural skill development and skill transfer. Pre-departure training is usually composed of (a) an introduction to culture-general information, and (b) country-specific briefing information. Provision of accurate pre-departure information is critical. However, if the information is inaccurate, or incomplete, it may encourage stereotyping and a false sense of cross-cultural expertise. In this study a number of conflicts centered on subtle cultural differences such as social class and regional variations within the United Kingdom. The timing for a deeper understanding of cross-cultural negotiation or conflict resolution skills, for example, is after the expatriate has had enough time in-country to discover and appreciate the impact of culture.

Myth 3. A taxonomy of Cross-cultural skills (Ferraro, 1990) provides a description of the skills needed for effective cross-cultural interactions. Ferraro's taxonomy provides a foundation description of desirable behaviors, skills and attitudes for a discussion of intercultural effectiveness. However, it does not reach the level of specific skill analysis that takes interpersonal and situational factors into account Models using Culture Learning and Social Skills theory have attempted to reach the level of analysis required to determine cross-cultural skill-knowledge deficits in specific interactions. To propose taxonomies, which include broad culture-general skills and personal attributes, confuses the issues involved in training for cross-cultural effectiveness. The HRD focus is more appropriately placed on analysis of skill and knowledge deficits within cross-cultural interactions.

Myth 4. If expatriates have adequate skills in problem solving and conflict resolution in their native culture, those skills will be appropriate and transferable to other cultures. It is probable that a number of problem solving skills are transferable from the US to the UK cultures. However, this study revealed that some conflict resolution skills, which had been used successfully in the US, proved to be less appropriate for use in the UK. In the conflict incidents described, the skills that proved to be less successful in resolving conflict situations, included assertiveness skills, (or *self-directedness* on the CRIS scales), mutual problem-solving based on power equity, and *self-disclosure*. The 10 Britons at the University of London who took the CRIS and participated in a feedback session provided information on a number of subtle differences between the US and UK cultures. For example, when an American Expatriate uses *self-disclosure* as a coping resource for stress, the intention may be to build a relationship capable of providing social support. Such an action, however, may be interpreted by a British host national as an invasion of privacy and might be met by a negative response. In addition, Britons may be less likely to use "American assertiveness," which may be viewed as aggressive.

The data in the cross-cultural conflict incidents in this study also raised questions in relation to span of control for the expatriate and the host national. When external stress demands, such as the distribution of resources, are central to a conflict, the demands may be beyond the span of control of the participants in the cross-cultural conflict interaction. When a mutually agreed upon resolution was attempted after a cross-cultural conflict incident, the following were evident: (a) an awareness of external and internal stress demands, (b) an awareness of power equity issues, (c) cross-cultural skills in problem solving and conflict resolution, and (d) skills in coping resources for stress.

Summary

The purpose of this study was to describe cross-cultural conflict situations and to illuminate factors that may be affecting cross-cultural transition and cross-cultural effectiveness. This descriptive case study has added to the body of knowledge regarding intercultural effectiveness with the ultimate aim of improving Human Resource Development services for individuals and organizations in the expanding global arena.

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Re-conceptualizing Marsick and Watkins' Model of Informal and Incidental Learning in the Workplace

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This paper presents an empirically grounded re-conceptualization of Marsick and Watkins' (1990, 1997) models of informal and incidental learning in the workplace. The re-conceptualized model encompasses the learning perspectives of small business owner-managers who work in the volatile political and economic environment of the transition to a free market economy in Romania, a group that has not been represented in previous research based on these models.

Keywords: Informal and Incidental Learning, Theoretical Model Building

The seeds of informal and incidental learning concepts were planted long before scholars and practitioners began to use these terms. In the 1920s and 1930s, Lindemann (1926) and Dewey's (1938) vision of learning emphasized the role of reflective thought in education and the importance of learning from experience and lifelong learning. Although Knowles (1950) introduced the term informal learning in his pioneer work entitled *Informal Adult Education*, only in the last two decades did researchers embark on defining and studying this type of learning (Bell, 1977; Mocker & Spear, 1982; Marsick & Watkins, 1990, 1997; Watkins & Marsick, 1992; Center for Workforce Development & Education Development Center, 1998; Garrick, 1998; Lohman & Woolf, 1998). A search of Dissertation Abstracts International alone revealed 143 dissertations between 1980 and 1998 that discussed issues surrounding informal learning. The studies cover a wide variety of settings such as health care (La Paro, 1991; Larson, 1991; Menard, 1993; Murray, 1993; Carter, 1995; Rossi, 1995); education (Selke-Kern, 1986; Mealman, 1991; Dowrick, 1992; Ahmad, 1994; Mott, 1994; Lewis, 1995); and business (Carrigan, 1989; Dechant, 1989; Howe, 1991; Macmahon, 1992; Volpe, 1992; Diaz-Alemany, 1993; Morton, 1993; Stevens, 1993; Bierema, 1994; Shapiro, 1994; Ellinger, 1997; Cseh, 1998). These studies attest to the importance and prevalence of informal and incidental learning in the workplace.

About a decade ago, Marsick and Watkins (1990), based on their research and inquiry into the learning process, set out to describe and define informal and incidental learning. Their journey in the realm of informal and incidental learning is still continuing while more than twenty of their students have used their models (1990, 1997) to explore the informal and/or incidental learning of different professionals or groups of people. The need to re-conceptualize Marsick and Watkins' (1990, 1997) models came from the theoretical implications of Cseh's (1998) study of the learning of owner-managers of small, successful Romanian companies working in a volatile environment so different from the relatively stable context of studies conducted in the United States and Western Europe. This study was not designed to empirically test these models, but to elaborate on the triggers, learning strategies, and lessons learned. Although this study added thick description to these three components of the models, the question of what is not captured in the models seemed worthwhile to explore and an empirically grounded re-conceptualization of the models into a model that incorporates that learning was a result of our exploration. In the following sections we define informal and incidental learning, present Marsick and Watkins' (1990, 1997) models, Cseh's (1998) contributions, and our re-conceptualized model.

Defining Informal and Incidental Learning

As the concepts of informal and incidental learning, natural learning, experiential learning, everyday learning, intentional learning, nonformal learning, self-directed learning, self-planned learning are used interchangeably in the literature and they are in contrast with formal learning; we consider it important to define these concepts. Formal

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learning is typically formally structured, institutionally sponsored, classroom-based learning where an educational agent -- educator or trainer -- is responsible for planning, implementing and evaluating the learning that takes place (Brookfield, 1983; Marsick & Watkins, 1990; Merriam & Caffarella, 1991; Watkins & Marsick, 1992).

We define *self-learning* as the learning initiated by the learner that can happen either in formal or informal settings. In contrast with formal learning, *informal and incidental learning* refers to the learning that results from the natural opportunities for learning that occur everyday in a person's working life when the person controls his/her learning. Some types of informal and incidental learning include self-directed learning, social learning, mentoring, coaching, networking, learning from mistakes, trial-and-error. According to Marsick & Watkins (1990, 1997), Watkins & Marsick (1992) informal learning can be planned or unplanned and involves some degree of conscious awareness that learning is taking place. Incidental learning, "a subcategory of informal learning, is defined by Watkins as a byproduct of some other activity, such as task accomplishment, interpersonal interaction, sensing the organization, trial-and-error experimentation, or even formal learning" (Marsick & Watkins, 1990, p.12). Incidental learning is unintentional/unexpected and almost always takes place although people are not always conscious of it. When it remains unexamined, it may lead to reinforcement of misconceptions and prejudices, thus to learning of error or no learning at all, becoming 'miseducative' (Jarvis, 1987). This type of learning is tacit, taken-for-granted, and implicit in assumptions and actions. Examples of incidental learning are learning from mistakes, assumptions, beliefs, attributions, internalized meaning constructions about the actions of others, and in hidden curriculum in formal learning. This learning is of particular interest since it so often is recognized through post hoc reflection. As a result, the role of the learning facilitator is wholly transformed.

Marsick and Watkins' (1990, 1997) Models of Informal and Incidental Learning

Marsick and Watkins (1990, 1997), Watkins and Marsick (1992) developed a theoretical framework and a model for understanding informal and incidental learning in the workplace. As they described, "we based our model on the action science model of Argyris and Schön (1978) that, in turn has roots in John Dewey's (1938) theories of learning from experience and in Kurt Lewin's understanding of the interaction of individuals and their environment" (Marsick & Watkins, 1997, pp. 295-296). This model was developed and refined over the years. In their book *Informal and incidental learning in the workplace*, Marsick and Watkins (1990) present an incidental problem-solving model (Figure 1).

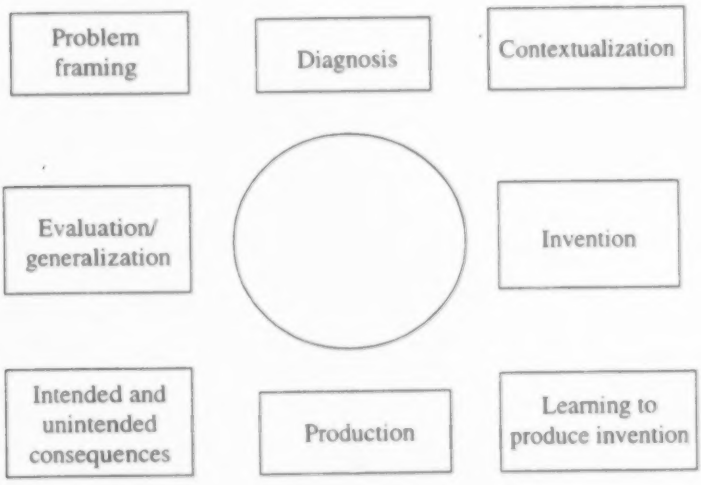

Figure 1. Incidental learning as part of problem-solving model From: Marsick, V. J., & Watkins, K. E. (1990). Informal and incidental learning in the workplace. London, England: Routledge. Reprinted by permission.

In this model, when learning takes place from experience, under non-routine conditions, people frame the situation they encounter (Diagnosis) by using their judgement based on their previous experiences and knowledge (Problem Framing). In order to develop a strategy to deal with the situation, they view solutions through the lens of the context, assessing the constraints and limitations of that context against the feasibility of each solution (Contextualization). Thus, in this model the context is used to test possible solutions. Once a strategy or invention is formulated (Invention), people may need to learn how to produce that strategy (Learning to Produce Invention). The implementation of the strategy (Production) leads to consequences which may be the intended ones or sometimes unintended ones (Intended and Unintended Consequences). People then embed into their consciousness assumptions or generalizations about whether or not the strategy worked. Thus, out of the consequences, meaning is made of the experience and what is learned from the experience is retained (Evaluation/ Generalization).

Marsick and Watkins note that individuals may make errors at any point in this cycle and errors made in an earlier stage almost guarantee errors in later stages. They contend that "Because this problem-solving so often occurs as an automatic process and because so much of the process is tacit or unexamined, the potential for error is great" (p. 225). In order to avoid some of these errors, thus to be more effective in solving problems, the authors underline the need for surfacing this learning. Marsick and Watkins' research showed that critical reflection enabled people to challenge norms and examine the assumptions behind their reasoning and actions. They noticed that "People learned best when they were able to ask questions about why they saw the world as they did, whether their thinking was true, or how they came to believe a perceived truth that they held sacred" (p. 220). They also noticed that this process was mostly enabled through the assistance of facilitators, mentors, colleagues, family, or friends whose feedback opened the learners up to other points of view.

Marsick and Watkins (1990) also developed a model of informal learning that is essentially a problem solving model: formulate a problem, design and implement a solution, and assess results. Formulating a problem is preceded by intelligence activity; designing a solution is preceded by design activity and followed by choice activity; and implementing a solution is followed by experimenting activity. These stages were merged in the 1997 model. In 1997, Marsick and Watkins present a revised model of informal and incidental learning (Figure 2).

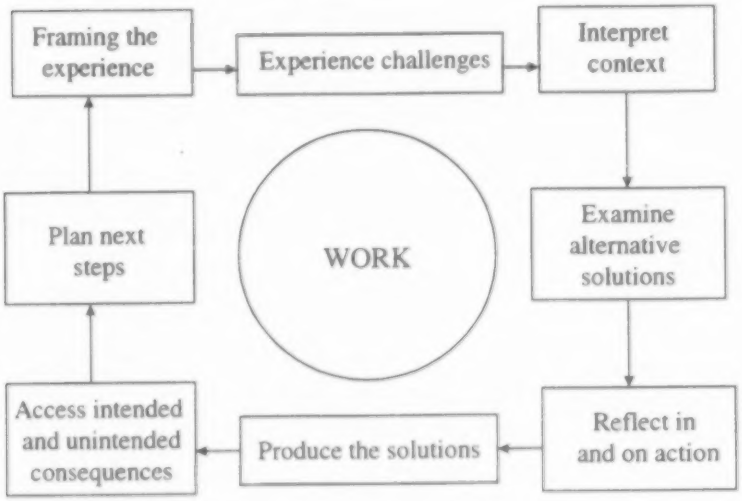

Figure 2. Informal and incidental learning model
From: Marsick, V. J., & Watkins, K. E. (1997). Lessons from informal and incidental learning. In J. Burgoyne & M. Reynolds (Eds.), Management learning: Integrating perspectives in theory and practice (pp. 295-311). London: SAGE Publications. Reprinted by permission.

Based on insights gained from action science and theories of learning from experience, Marsick and Watkins reinforce the idea that problem solving is not linear and thus, their model is neither linear nor prescriptive. As they describe it, "steps such as observation and reflection are interwoven throughout various phases of the model, and the learning process varies because of the situation in which people find themselves. The problem-solving cycle is

embedded within a sub-surface cycle comprising the beliefs, values and assumptions that guide action at each stage" (p. 297). Marsick and Watkins remind again that because informal and incidental learning is seldom consciously and critically examined, it is subject to a high degree of misinterpretation. Thus, they emphasize the need to identify and acknowledge the tacit beliefs, values, assumptions, contextual factors and unintended outcomes.

A Re-conceptualized Model of Informal and Incidental Learning

The need to address the re-conceptualization of Marsick and Watkins' (1990, 1997) models came from the findings of Cseh's (1998) study. This study emerged from the researcher's interest in helping managers in Central and Eastern Europe cope with the unprecedented changes they were facing. As Child and Czegledy (1996) noted, "Since 1989 the area has been experiencing economic and political reforms of immense proportions. It has become a 'living laboratory' in organizational transformation within a context of profound institutional change" (p.167). The purpose of Cseh's (1998) study was to examine the critical learning experiences which enabled owner-managers of small private companies in Romania to lead successfully in the transition to a free market economy, in order to determine what triggered their learning, what strategies they used, and what lessons they learned. In-depth, face-to-face interviews using the critical incident technique were conducted with 18 managers. Fifteen managers, between 28 and 62 years of age and representing both genders and the nationalities (Hungarian and Romanian) specific to the two Romanian regions selected, were included in this study. Seventy two critical incidents were generated. Content analysis was used to initially code the data in three major categories: Triggers, Learning Strategies, and Lessons Learned. These categories were predetermined based on Marsick & Watkins' theoretical framework. During this process, a new category clearly emerged. This category, "Framing the Business Context," was defined as the constraints and opportunities perceived by the managers in the context in which they operated. A total of 511 data strips were categorized in this way. The third step in analyzing the data was the open coding of the data inside each of the categories to obtain specific themes. For an elaboration of Cseh's specific findings, see Cseh (1999) in these proceedings.

All of the managers participating in this study gave detailed accounts of their perception of the economic, political and social context in which they worked and their learning experiences were all embedded in this context. The fact that 111 data strips represented by sentences or phrases emerged from the data as related to the managers' business context strengthens the argument that learning is embedded in the context of the learner and that triggers for learning are selected based on this framing of the business context.

Based on this study, it is clear that the context permeates every phase of the learning process - from how the learner will understand the situation, to what is learned, what solutions are available and how the existing resources will be used in the learning process. The following examples of critical incidents illustrate the influence of this turbulent context on the learning of the owner-managers.

The changing legal system and its lack of clear rules and ever changing regulations was mentioned by several managers as triggers of their critical incidents and thus of their learning. Although the manager of a company manufacturing leather clothes was assured by authorities that he could take apprentices and certify them, when the time for certification arrived, it turned out that he had no right to certify. He recounted how "until this day the law didn't come out, so private companies can't train, actually they can train but not certify apprentices." This put the manager in a very difficult situation as he promised the parents of his apprentices that in two years they will be certified. And he kept his promise by talking to the director of a Co-op school which had the right to certify. With his help, he organized classes, brought together professionals to teach these classes, and talked to the parents to decide how to divide the instructional fees. All of this involved a tremendous effort, but he managed to solve the situation and learned a lot in the process.

Similarly, government red tape often thwarted these entrepreneurs efforts. No help and support from the government and the problems in dealing with state-owned companies were mentioned by the managers on twenty five (25) occasions as hindrances in their work. When talking about the incident when his company's license was revoked, one owner-manager described how

> The Romanian Transportation Ministry didn't help us at all. To the contrary, they told us to go and solve our problems elsewhere, and that they don't want to get involved in anything. So far, the ministry - and I suppose the government as well, although I didn't work with it directly - didn't support our activities. They don't want to get involved in problem solving, but these small companies which are just forming these days need their help and they should act like a hen for the chicks. Especially since these small and medium size companies, being so many, contribute to the

> country's economy a considerable amount of money in comparison to the big mammoths [state-owned companies] which have enormous losses.

As the re-authorization of the company's license had to be approved both by the Romanian and Hungarian transportation ministers, this unwillingness to help on the part of the Romanian ministry caused the transportation sectors executive director a whole month of commuting between Bucharest and Budapest while he tried to learn how to solve this problem. Although it was never found out who the drivers were who caused this incident, the license was re-authorized after suitcases of files with all of the driving records, stamped with the hours and dates of departures/arrivals, proved the good standing of the company. While telling his story, the manager also remembered how in general:

> It's hard to solve any problem in government institutions. The public office worker here is like [he] always was: he keeps you at the door, and when you enter after three hours waiting he will tell you, 'I don't have time now. Come back tomorrow,' or 'next week,' and when you go back the next week he'll tell you, 'I don't know what I did with your papers.' These things happened to me, like I sent somebody there, and my paperwork was lost and my representative was told, 'I don't have time now, I have to go somewhere. Come back next Monday,' etc. ...This is a phenomenon we all know and it gets us angry, but there is nothing to do about it; so we must go on and hope that things will change in time.

Obtaining a loan from a bank is described by many of the managers as a very cumbersome and difficult process. Rigidity and poor service offered by the banks triggered the learning of several managers in this study. One manager offers an illustrative story. The Romanian market did not provide a domestic-made bus that would meet the international tourism/human transportation requirements, so the manager had to buy buses from Hungary. As these buses are not imported to Romania, an invoice from the vendor had to be presented to the bank which in a few days announced its decision for the amount of foreign currency. And then came the problem as he described it in the following passage:

> Well, if I had found a bus for sale in Hungary, the vendor will not wait for the money transfer, which can take from a week up to a month. He doesn't know me and he will not wait for a month to get his money, especially being in a different country. He is saying: 'Bring me the cash and I'll give you the merchandise, or send me the money and when I get it I will send you the bus.'.

Almost all of the managers talked about their problems in working with state-owned companies which still have the monopoly in a lot of fields and especially as suppliers of raw materials. These companies also prefer to work with other state-owned companies, leaving the private companies on the fringe. Describing the preference of state-owned businesses to deal with their own, and his major problem in getting contracts with the stores which were mostly state-owned, the manager of a sporting goods manufacturing company, said:

> They [state-owned stores] know that my products are good, but some of them just couldn't care less, and they say, 'why should I buy from him when the state-owned company's products are good enough?' There is a state-owned company which in the old times and even now is manufacturing backpacks, catastrophic ones, and better not to talk about their tents. So, they all knew each other these old state-owned businesses. The store managers had friends there, knew the director, the director knew I don't know who and they used to eat and drink together during the so called contract entering times. These old ways of deal makings are still in place. They are organized at the seaside or in other resorts. The only purpose of these gatherings was for the people to spend a good time on company money for two, three days or a week; to eat, drink and enjoy themselves. Thus, this was the essence of these contracting gatherings. In fact they didn't sign contracts, but displayed their products and left them under the surveillance of one or two unlucky young engineers while they were gone eating, having fun, taking a swim, etc. with the directors. So, there were situations like this that they [store managers] knew the director of the state-owned company and although I had products of much better quality, they didn't know me. 'We will go to the state-owned company and buy from them,' they said. If I told them to compare the two products, they told me, 'No, last year we bought our products from them, too.' This is exactly like the story with the street curve. Yesterday I drove in the other lane to cut the curve and

> nothing happened, so I can do it again today. They also bought the same products last year from that company, so this is the mentality.

The old regime mentality and poor work ethic of the employees was another source of major problems according to the managers. The managers interviewed also talked about the mentality of some managers in Romania. One person said:

> And talking about managers, I think that they should try to gather good people in their companies, but this is again a contradiction of the previous mentality when the boss tried to get rid of all the good employees in order to eliminate potential competitors. You see, there are things like these which bring extraordinary contradictions and create problems because a lot of people have still the old mentality. They cannot realize that if you have a good company and you gather around you only incompetent people you are doomed to failure together with your company.

As these examples show, these managers viewed their context as being the whole economic, political and social environment of Romania as part of Central and Eastern Europe. The lenses through which they saw their world framed their critical incidents and learning experiences. The context was sometimes interpreted as a macro level trigger of critical incidents, as a barrier in finding solutions to their problem, or sometimes as offering potential opportunities. Although the context of learning, which is used to test possible solutions, is mentioned in Marsick and Watkins' (1990, 1997) models, its pervasive influence on each phase of the learning process documented here is not depicted in their model.

Analyzing the managers' learning experiences, it also became apparent that the language used in Marsick and Watkins' models (1990, 1997) did not fit the language used by the participants, so further modification of the models seemed appropriate. We therefore have re-labeled the components of Marsick and Watkins' models and embedded the entire model in the context. We created the following new labels: "Frame the context" instead of "Problem framing" or "Frame the experience"; "Triggers" instead of "Diagnosis" or "Experience challenges"; "Choose learning strategies" instead of "Learning to produce invention" or "Reflect in and on action"; and "Evaluate lessons learned" instead of "Evaluation/generalization" or "Plan next steps." An empirically grounded re-conceptualization of the original model into a model (Figure 3) that incorporates the learning processes both in terms of the sequences in which people engaged in them and the language they used to describe them is the result of this exploration.

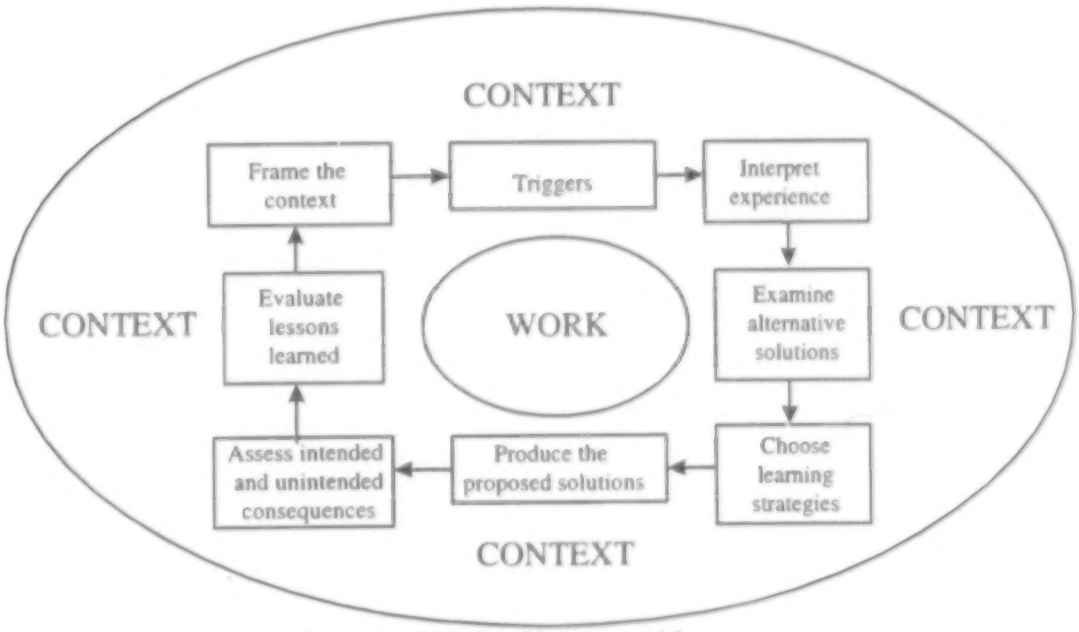

Figure 3. A re-conceptualized informal and incidental learning model

Conclusions and Implications

Reading these critical incidents, it might be reasonable to wonder whether or not this context is too unique to warrant re-conceptualizing this model. Our view is that the extremity of these examples actually made more visible the changes we needed to make in the model. This re-conceptualized model presented in Figure 3 extends Marsick and Watkins' (1990, 1997) and Watkins and Marsick's (1992) theoretical framework and models of informal and incidental learning in the workplace. This model encompasses the learning perspectives of small business owner-managers who work in a volatile political and economic environment, a group that has not been represented in previous research based on these models. Future research may be guided by a stronger, more empirically derived model of learning in the workplace.

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Creativity and Design

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The creative processes and attributes of ten HRD practitioners were examined in this study, using both qualitative and quantitative methods. Results include a comparison of creativity styles/preferences using the Myers-Briggs Type Indicator and the Kirton Adaption Innovation Inventory as well as a model derived from the data, which describes the creative design process used by the subjects.

Keywords: Creativity, Design, Personality Preferences

This research explored the creative processes involved in the design of human resource development (HRD) interventions. These interventions include systems, processes, and programs to help people gain knowledge and skills so that they can improve their individual, group and organizational performance. Common HRD interventions include training programs, team building consultation, and strategic planning facilitation. While there are models and guidelines for developing these interventions, there is little research on the creative processes involved in their design. For example, how does one generate a novel idea, select an effective strategy, or determine a successful mix of learning activities?

Problem Statement and Theoretical Framework

There is substantial literature and research on designing HRD interventions, both in the areas of training and consultation. Many of these instructional and consulting models offer a step-by-step process to the overall intervention (Block, 1981; Dick & Carey, 1990; Kemp, Morrison & Ross, 1994). Recently, there have been discussions about the iterative, holistic, and chaotic nature of the process as actually practiced, which has resulted in instructional design models with flexible and fluid boundaries, with choices and options, or with numerous recycling loops (Korth, 1997; Seels, 1995; Tessmer & Wedman, 1995).

"To design is to create some new thing of practical utility. The basic act of design is to leap out from what exists to something previously unimagined" (Rowland, 1994, p. 3). Whereas research has been conducted on what designers do in practice (Perez & Emery, 1995; Rowland, 1992), little research has focused on how designers actually make that leap, how they come up with ideas that were previously unimagined.

What is the creative element in this design process? Creativity is commonly defined as the production of ideas that are novel and useful (Puccio, Treffinger & Talbot, 1995). There has been an increased interest in corporate creativity, with studies exploring how innovation and improvement "actually happen" in organizations and identifying elements that enhance employee creativity (Oldham & Cummings, 1996; Robinson & Stern, 1997). But how does this creative process work for training and organization development professionals who are designing HRD interventions? Several writers have been exploring the element of creativity in instructional design. Nelson (1994) discusses being undisciplined and out of control as enhancing creativity. Rowland & Wilson (1994) offer possibilities as to how designers can balance seemingly paradoxical issues to make decisions regarding the design.

Outside of the design discipline, much has been written on the creative process in general. While the various processes involved in creation are complex and interfused, researchers have been documenting generic stages of the process since the 1920's (Wallas, 1926). Wallas' stages, which have served as a framework for understanding the creative process, include: (1) preparation, where the person does both formal and informal work by studying, thinking, searching for answers; (2) incubation, when the process rests and the unconscious mind takes over in order to organize, synthesize and transform ideas; (3) inspiration, which brings the process to a climax when everything falls into place with a Eureka; and (4) verification, measuring the product to both internal and external criteria.

How are the design and creative processes interrelated? Where is creativity used during the process of designing HRD interventions? Can the lessons from one discipline (creativity) inform and enhance the other (design)? The purpose of this research is to explore the creativity styles/preferences of HRD practitioners and to examine the creative elements of the design process.

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Research Questions

Do HRD practitioners engage in creative processes? What are the creative parts of the HRD intervention design process? What are similarities and differences in the creative practices of HRD practitioners? What are the relationships, if any, between types or levels of creativity, personality preferences, and HRD practitioners' descriptions of their design processes? How could this information be of use to HRD professionals, faculty, and researchers?

Methodology

A qualitative approach was used in this study due to the nature of the research questions. The researchers wanted to capture data on the perceptions and practices from the insider's perspective. Specifically, the collective case study approach was used, which involves multiple cases in order to shed light on a complex phenomenon or population (Stake, 1994), in this case the creative processes employed by HRD professionals while designing interventions.

Data Collection

The primary means of data collection was individual interviews. The first interview was comprised of a series of questions related to the creative processes involved in intervention design. The tone of the interview was informal because the researchers wanted the subjects to feel comfortable talking about their experiences. The second round of interviews included some specific questions, but also some activities, including a drawing task, a word association activity, and reaction to a specific situation in a case scenario.

In addition to the interviews, two instruments were administered to the subjects, the Myers-Briggs Type Indicator (MBTI) (Form G) and the Kirton Adaption Innovation Inventory (KAI)*. The MBTI is based on the work of Swiss psychotherapist Carl Jung (Myers, 1993) and reflects individual preferences for energy (Extraversion and Introversion), information gathering (Sensing and Intuition), decision making (Thinking and Feeling), and lifestyle (Judging and Perceiving). Each of these four dimensions is measured on a scale; sixteen unique personality types result from the combination of the four MBTI preference scales.

The KAI (Kirton, 1987) is a 33-item self-report inventory to measure cognitive style in creativity, problem solving, and decision making. Kirton (1976) theorized that there are two different styles of creativity, adaption and innovation, and developed the KAI, which locates the respondent on a continuum ranging between high adaption and high innovation, corresponding with low-high scores. Adaptors tend to use available procedures and approaches to problems, whereas innovators try to restructure problems and use less conventional approaches. Possible scores on the KAI range from 32 to 160, with a standard deviation of 16. Scores above 96 characterize innovators and scores below 96 characterize adaptors.

Subjects

The ten subjects in this study were selected by the researchers, from a pool of known local HRD professionals, because of their considerable experience in designing a variety of HRD interventions. The researchers did not attempt to categorize subjects as to perceived types or levels of creativity as part of the selection process. The subjects include four males and six females, and their years of HRD professional experience range from 7 to 19 with the average of 12.9. The subjects' prior and current work experience includes private, public, and non-profit across the following areas: health care, retail, pharmaceutical, service, manufacturing, banking, telecommunication, social services, and volunteer organizations/boards. Types of interventions with which the subjects have experience include: teambuilding, executive coaching, career development, training (technical and non-technical), management and leadership development, group facilitation, train the trainer, strategic planning, OD interventions, quality improvement, and conflict resolution.

Data Analysis

The twenty interviews were audiotaped and transcribed. The qualitative data analysis software, Non-numeric Unstructured Data Indexing Searching and Theorizing (NUD*IST 4) (Qualitative Solutions & research Pty. Ltd., 1997), was used to aid in the coding, indexing, and sorting process as themes, commonalities, and differences emerged from the data. Data analysis occurred simultaneously and sequentially using the constant comparative method (Lincoln & Guba, 1985). The researchers continuously reflected on the meaning of what was heard and the direction in which the research should go next, constantly comparing the data against themes and looking for data that both confirmed and disconfirmed interpretations. Several tactics for generating meaning were employed throughout the research, including: noting patterns, seeing plausibility, clustering, splitting variables, subsuming particulars into the general, noting relations between variables, and making conceptual/theoretical coherence (Miles & Huberman, 1994). In addition, in order to increase the validity and reliability of the data, the researchers checked for representativeness and researcher effects, triangulated the data by utilizing a variety of collection techniques, used extreme examples, and solicited feedback from informants.

Results

The results of the KAI and MBTI are displayed on Table 1.

Table 1. Relationship Between MBTI & KAI Scores

Subject	Myers-Briggs Type Indicator (MBTI) Personality Type	MBTI Creativity Dimensions	Kirton Adaption-Innovation Inventory (KAI)	
G	ESTJ	SJ	84	Adaptor
J	ESFJ	SJ	86	Adaptor
B	ISTJ	SJ	105	Innovator
F	ESFJ	SJ	105	Innovator
H	ENFJ	NJ	112	Innovator
A	ENFJ	NJ	115	Innovator
I	ENFJ	NJ	124	Innovator
E	INTP	NP	130	Innovator
C	ENTP	NP	134	Innovator
D	ENFP	NP	138	Innovator

The scores on the KAI ranged from 84 to 138, identifying two subjects as adaptors and eight as innovators. MBTI scores showed that the ten subjects represented seven different types. Creativity research using the MBTI has determined that two of the four dimensions are related to creativity -- the information-gathering preference (S-N) and the lifestyles preference (J-P). Intuition (N) and Perception (P) are shown to be related to higher levels of creativity (Myers & McCaulley, 1985). Pairing the information-gathering preference (S-N) and lifestyles preference (J-P) shows that four subjects have the SJ combination, three have the NJ combination, three have the NP combination, and none have the SP combination. Interestingly, the MBTI combinations correspond to the KAI results. Those with the SJ preferences have the lowest KAI scores (indicating adaption), those with the NJ preference have the middle KAI scores, and those with the NP preferences have the highest KAI scores (indicating innovation). This is consistent with other research involving the KAI and MBTI (Carne & Kirton, 1982; Gryskiewicz & Tullar, 1995) which found that preferences for N and P were associated with an innovative style.

The results of the qualitative data analysis reveal similarities and differences among the subject related to their creative processes. The similarities will be described in a model that the researchers derived from their data, while key differences will be subsequently discussed in relation to that model. The phases in the creative-design process that emerged from the data are: (1) Diagnosis, (2) Immersion, (3) Percolation, (4) Aha, and (5) Checking (DIPAC).

Phase 1: Diagnosis

What is the problem? What is the cause of the problem? What is the desired result? What are potential solutions? Who needs to be involved in gathering and analyzing this information? This phase involves understanding the problem/situation and expected outcome, as well as determining the cause and a potential intervention strategy or solution(s). All ten subjects described this phase as rational, logical, and collaborative, where they worked jointly with stakeholders to identify the business need and the expected outcome. One subject mentioned that this was basically an analytical phase of the process, but creativity was needed to figure out how to involve the right people in the data collection and decision-making. Much of the discussions across the subjects focused on digging below the surface of the original problem to find the root cause of the issue.

Subject D: "Instead of providing them with solutions, what I'm doing is asking a series of questions to really uncover what they think the problem is and to find out if that is actually the problem. I want to know what they think is the problem and what they see as the essential obstacles or perhaps what they've tried, what's worked, what hasn't. And through this questioning process I start formulating what might be done as an intervention and ideas about the depth of the intervention"

Subject I: "One thing I do right up front is identify very clearly the business needs that we are addressing with this and what the behavioral or the desired performance is going to look like afterwards, so we have some sort of measurement. Here's where we are today, we know that, here's what we want to achieve, here's why, and this is what this behavior should look like when we're done."

Phase 2: Immersion

How do I think about the design options in ways that help me make decisions? How do I explore all reasonable options? How do I tap into my own reserve of knowledge and experience? Who, what, and where are my resources for ideas? How do I gather information and conduct research? This phase involves generating ideas for the intervention and was commonly characterized by the subjects as creative, in contrast to the prior more rational diagnostic process. It involves gathering information, conducting research, and consciously playing with that information in ways that will lead to making decisions about "how" the intervention will take place. The subjects utilized many techniques to help them in this phase of the process, which included: reading; talking to others; researching on the Internet; going to personal files; recalling related past experiences; using display tools such as sticky notes and the computer; thinking about the intervention from the perspective of the learner; and looking around at everyday life events to look for resources and ideas. Many of the subjects mentioned visualization and mental imagery as an important part of the process.

Subject E: "If you don't immerse yourself in the topic and just kind of think about all of the things that you know, you miss out on so much. I make a mess. I clean off my desk, I'll write notes, I use my memory, the PC, e-mail notes, little stick-ums everywhere. I have folders on everything."

Subject J: "We'll just let it be free flowing and we'll brainstorm with yellow stickies from our own experience, from our knowledge, from the information we received at the intake, from a whole variety of sources. If we find that we need more information then we'll hone in on those particular areas and we'll do literature searches, we'll go to the Internet, we'll go to the library, journals, a whole variety of places to get additional information."

Phase 3: Percolation

How do I help the ideas grow and gel? What enhances the synthesis process? How important is it that I have a chance to get away from the data generated in the immersion phase? In contrast to the prior phase, this phase involves the subconscious. In this phase, subjects are purposefully tapping into their subconscious, knowing that the ideas are still there and not finalized, but letting the ideas rest. Terms used to describe this phase included: germinate and grow, let it stew, incubate, simmer, sleeping on it, stewing in my brain, putting it on the back burner.

Subject A: "I put it on the back burner and I'm still tending to it in some sense but it may not have my full attention at that point. You know what you're working on it and the brain is always going off in different directions. There are times when I just have to shut if off and go do something else…Your subconscious – I think it's nothing more than a bunch of experiences all tied up together and wreaking havoc back there."

Subject B: "The complementary activity (to immersion) is to just get completely away from that and do something that would seem on the surface to be totally unrelated, which is to go run, swim, sit in the sun, or do needlework. I find that some kinds of incubation activities are creative, like needlework or sewing. I love to sew

and it's not just to get my sewing out of the way, or knitting something, or do something physical. It gets my mind off of it."

Phase 4: Aha!

When does the breakthrough come? Where and how do the inspirational ideas emerge? This phase is where the illumination, the breakthrough, the insight happens! Most subjects described their breakthrough moments as coming out of the subconscious percolation phase. Furthermore, most of the insights occurred away from the formal work environment, such as when taking a walk, driving, or taking a shower. This "aha" moment was described as magical and mysterious, and subjects claimed it was accompanied with a surge of energy and focus. One subject explained how it sometimes happens when you are talking to someone and how it is difficult to continue the conversation when this insight on some other topic has just occurred.

Subject C: "When I'm at home, to relax, I do things like crossword puzzles and jigsaw puzzles. I think it relaxes me because it's kind of a Zen-y thing, like I have to think about this but I'm not really thinking about anything, but I'm thinking underneath it. It is often when I'm doing some of that unconscious processing that ideas pop up. I had one (aha) standing home one weekend ironing. It had been kind of tossing around in my head for several days and then it bubbled up. I feel that intuition is nothing more than just accessing data that you don't realize you're accessing."

Subject F: "It's usually not sitting at my desk. I lot of my ahas happen with I'm driving. If something has occurred to me I will write it on a piece of scrap paper and put it near the file."

Phase 5: Checking

How do I know if my idea will work? How do I validate or verify this insight that has just occurred to me? How do I decide if I will go ahead and incorporate this idea into the design? This phase involves determining if you will move forward and actually use the "aha." Subjects described a variety of ways to validate their ideas. Interestingly, most said that they trust their gut or their instinct. If the idea has come from the prior steps in the creative-design process, it seems to be right. Techniques mentioned by subjects included: checking their idea against their prior experiences, seeing if it will support the goals developed in the diagnosis phase, checking for content-relevance, talking to someone who has done similar interventions, running it by a trusted colleague, or getting feedback from someone who has an opposite style. After this first phase of confirmation, most subjects mentioned formalizing the ideas by writing them up and getting feedback from the client or stakeholders in the process. But in general, the subjects remarked that when an idea emerged from this process, there was usually an intuitive sense that the idea was right!

Subject G: "Usually I start calling someone I know who has done something that may be similar and try to bounce ideas off of them, so I use that network. It's pretty intuitive. I can't pin down how I decide except that I'm always focusing on the goals or the outcomes and as long as I keep that clearly in mind then I keep going back and testing, 'Is this going to meet the goal or not?'"

Subject H: "I usually run it by a few people in HRD in our company that may not necessarily be in my division. That's usually what I do, but to be quite honest, I trust my instincts a lot, probably more. I kind of know right after it has come out of the incubation period that it's probably the right thing to do and it's going to fly really well."

Summary

This five-phased model for the creative aspects of the HRD intervention design process is a collective description of the subjects' processes. While there were many consistencies in the general phases, there were individual differences within the phases. Each subject seems to have developed an effective, successful individualized process and has a sense of confidence, not panic, that ideas will pull together when needed. The subjects "trusted the process." Subject D recounted: "I've gotten comfortable with that sense that there will be that period of void -- there will be that period of blackness or blankness or whatever you call it, and that somehow in immersing myself in content and then trusting the creative process that I've come to know as my own creative process, it really will all make sense. Whenever I can take advantage of that incubation period I think it results in a much higher quality product." Subject H described it: "It always comes together but I don't know how. It can make your manager a little nervous at times. But I've always been able to somehow magically pull things together. And

scary as it is, sometimes it's the night before. I always have a large amount of faith that it will come to me. It's not a planned thing. If I sat down and said, 'OK, tomorrow I'm going to plan how to do this,' it would not fly because it happens very spontaneously with me. All of a sudden I'll get one idea and all of these things start spinning off of that."

Differences

While there were many similarities across the subjects' descriptions of their processes, which are captured in the aforementioned creative-design model, there were also some notable differences. For example, almost without exception, Subject D had a different perspective than the other nine subjects. The general difference was that the HRD interventions described by Subject D were those involving on-the-spot facilitation, where design decisions were made in the moment, based on what is happening with the group members. The other nine subjects described both training and facilitation-type interventions, but all of the interventions involved a considerable amount of pre-planning (even of their facilitation interventions). All of Subject D's design happened in real time. The only place where there were similarities between Subject D and the others was in the diagnostic phase of the process, when the situation was being assessed, prior to determining or planning the approach or strategy. While Subject D has MBTI preferences of ENFP and the highest KAI score of 138, it is not known whether this distinction from the others is due to personality or creativity differences, differences in job responsibilities, and/or philosophical differences.

Another difference that appeared in the data analysis was that three subjects, A, H, and I, continually talked about how their professional and personal lives were intertwined. Without specific solicitation from questions, these three described how the resources for their intervention ideas were "everywhere" and that insights gained for their personal development also contributed ideas for their work-related interventions. Furthermore, Subjects A and H talked about how it is often difficult to turn off the ideas, that they are constantly bombarded with thoughts that relate back to their work and they have to monitor themselves so that it does not get out of control. Subject H said, "It's scary at times, because I get where I can't stop. I realize that I need to constrain the number of things." Subject A said, "Now the worst part of it is that when I get an idea I can't let go of it. In some ways it's like I never stop. It's almost like a sick obsession after a while because you never stop thinking about what you could do with this or when could apply that. I've gone so far as to grab toys out of my kid's happy meal because I think somewhere this is going to give me an idea of something I can do." Interestingly, these three subjects all have the ENFJ preferences (NJ function) and cluster in the mid-segment of KAI scores, from 112-124.

Conclusions

The creative-design process (DIPAC) derived from this research can be related to a generic instructional system design (ISD) model (Analysis, Design, Development, Implementation, and Evaluation (ADDIE) and Block's consulting model. Phase 1 of the DIPAC model, Diagnosis, relates to the analysis phase of the ISD model and the first three phases of Block's (1981) consulting model: (1) entry and contracting, (2) data collection and diagnosis, and (3) feedback and the decision to act. Phases 2-5 of the DIPAC model, Immersion, Percolation, Aha, and Checking, refer to the design phase of the ISD model and the implementation phase of Block's model, where the actual design of the intervention is embedded. Basically, the DIPAC model elaborates on specific parts of the process. It provides detail on how ideas are generated and decisions are made in the pre-planning or the design of the intervention. The detailed creative-design model that emerged from this research is very similar to the phases in the Wallas (1926) creativity model, but the steps are focused more specifically on designing HRD interventions and include an extensive analysis process.

While there were clear similarities across subjects that led to the creation of the DIPAC model, there are individual differences between subjects within each of the phases, resulting in a personal creative-design process. Also, there were distinctions between design and decision making that occurs before the event (for action) and design and decision making that happens during the event (in action). This was evident in the disparate responses from Subject D. Also, although some results did not appear that might have been expected, such as clear distinctions between the activities of adaptors and innovators, a relationship was shown between the MBTI and the KAI scores, indicating that both instruments are measuring similar elements related to creativity. Also, the three subjects with the ENFJ preferences and the 112-124 KAI scores demonstrated a strong integration of work and personal life throughout the design process, indicating that some differences could be related to personality preferences and creativity styles.

Finally, the design and creative process seem to be very interrelated. The subjects in this research, all experienced, successful HRD professionals, have learned to develop their own individualized version of this creative-design process and to trust that this process will help them generate useful ideas.

Limitations

The research involved a small number of subjects and was based on self-report data of thought processes or activities that could not easily be observed. As with any interpretive research, unintentional bias or subjectivity of the researchers is possible in the selection of the subjects, data collection, and analysis. The subjects in this case were a convenience sample from a pool of experienced HRD practitioners known to the researchers. This research is preliminary and calls for further study, both qualitative and quantitative, to validate and further explore the results. Additional research is needed to follow through with the implementation of the design ideas, to evaluate the effectiveness of the design on meeting the original goals, and finding relationships between the creative process and a successful "product." Another limitation of this research is that it is mainly focused on pre-planning events, so much more could be revealed by studying design decisions made in-the-moment, and comparing the two processes. Yet another aspect of creativity not explored in this study is the effect of inhibited creativity on both the design and the end result. Furthermore, this research focused on experienced practitioners; it did not offer a comparison between novices and experts. Finally, there are those who would resist the creation of any model related to the creative process and would regard a creativity model as an oxymoron.

Contribution to HRD Field

There is a current interest in embedding the instructional design process within a performance improvement framework, where effecting organizational goals is paramount. Furthermore, there is much interest in the area of creativity; organizations are recognizing the importance of enhancing the creativity of their employees, and researchers in the instructional design areas are searching for ways to understand and describe the creative elements of this process. This research makes a contribution across these areas. The creative-design model proposed by this study includes a diagnostic phase which addresses the performance improvement perspective, highlighting the importance of clearly understanding the problem within the context of organizational goals and finding collaborative ways to determine the root cause and appropriate solutions. The model also shows where creativity is important in design – where design and creativity merge. Basically, the creative elements of the design process are when professionals are trying to figure out "how" the intervention will take place. By deriving a model from practice and drawing parallels to models of performance technology, instructional design, and creativity, the disciplines become more integrated and fluid.

Practitioners could use this model to reflect upon and compare with their current practice. Use of this model for practice encourages professionals to engage in the activities that foster creative insight. Faculty who teach in areas related to intervention design could offer the model along with other design models to raise awareness of the role of creativity in the design process. Researchers could work to validate and expand this model. Specific areas for further research include comparing designing-for-action and designing-in-action, comparing novice and expert creative practices and results, and looking for relationships between creative design practices and improved organizational outcomes. This model is just a starting point for further exploration and debate regarding creativity in designing HRD interventions.

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*Note: Assistance with the KAI testing was provided by a KAI certified user.

Contradictory Practices: Critical Feminist Perspectives on HRD and Workplace Learning

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This study addressed HRD practice through the perspective of critical feminist scholarship including an analysis of feminist sociology of work, ethnographies of women in the workplace, feminist pedagogical theory and practice, and critical adult education. Specifically, the study examined the experiences surrounding HRD and learning in the workplace at two organizations over a six-month period. This research is part of a larger on-going project seeking an in-depth understanding of the relationship between work and knowledge production.

Keywords: Feminist, Critical, Qualitative

The purpose of this study was to explore the contradictions among critical feminist theory, Human Resource Development (HRD), and the reality of women's experience in the workplace. We believe that what is missing from the HRD literature, with its excessive managerial focus, is the centrality of workers' experiences of HRD and learning in the workplace. In particular, not only women's experiences but the gendered nature of work has not been addressed in the literature. The theoretical and empirical feminist scholarship on the sociology of work has assisted us in the analysis of the contradictory nature of current perspectives on HRD and workplace education. Increasingly, critical educators have begun to examine how HRD functions as an instrument for shaping and controlling workers. Our study extends this examination into critical feminist thought.

Theoretical Framework

Our inquiry is grounded in critical feminist theory. Feminist theory is interested in inquiry focused on agency, power relations, shifting positionalities, voice, individual experience, and socially constructed knowledge (Acker, Barry, & Esseveld, 1996; Tisdell, 1995). Although feminist theory is often oriented around the dynamics of gender, it is inclusive of the interests of others who have been marginalized by race, class, sexual orientation, language, and the practices and politics of educational systems (Lather, 1991a). Despite the agenda of inclusiveness, feminist theory has been described as lacking wholeness, due in part to the dominance of relatively privileged white women scholars (hooks, 1989; Johnson-Bailey & Cervero, 1996). Critical educators, however, define their field as epitomizing the democratic ideal and accept responsibility to work toward social justice and democracy (Briton, 1996; Cunningham, 1992; Kincheloe, 1999). Feminist theory and critical theory in education come together to disrupt the status quo in a myriad of learning environments by examining individual experiences as phenomena. Therefore, a critical feminist perspective considers issues of power as well as bringing out elements of affect, social justice, marginalization, and contextual links among both students' and instructors' social, political, historical, and cultural locations (Collins, 1990; Lather, 1991b; Lewis, 1990).

Research Design

Reflecting on our own experiences as workers and educators, we have found that the literature on work and learning, especially critical scholarly work, has helped us understand how the various dimensions of power operate in our own particular places of work (e.g., Butler, 1997; Graham, 1995; Hart, 1992, 1996; Hull, 1993; Luttrell, 1989; Stalker, 1996; Townley, 1994; Westwood, 1985). This critical reflection has also forced us to ask hard questions about the role education plays in the workplace. For example, who controls the goals, objectives, and definitions of learning and work, and for what purposes? Why does the assumption that workers personal objectives, visions, and points of view can and should be in alignment with management continue to go unquestioned? Is Human Resource Development imposed on workers for the purposes of organizational efficiency, productivity, and maximization of

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profit ethical? Can the instrumental goals of training, the ongoing hierarchies of work, and the sustained balance of power relations in the workplace really be aligned with a feminist perspective? Based on these questions, we chose a qualitative approach for our inquiry because, in part, as McClure and Lopata (1996) stated: "Qualitative techniques are especially appropriate for use in situations where the research problem and the research setting are not well understood . . . When it is not clear what questions should be asked or what should be measured, a qualitative approach will be more useful." (p.11). Marshall and Rossman (1995) also link qualitative methods and studies of an exploratory and descriptive nature, particularly in cases of "contemporary" research, where phenomena are unfolding at the time of the study. Critical ethnography is a " . . . reflective process with a political purpose asking what could be, not just what is . . . seek[ing] to empower the subjects, not speaking for the subjects, but rather speaking 'to' and 'on behalf of' the subjects (Thomas, 1993, p. 4).

Following the work of Bartunek and Louis (1996), we designed this study as an insider/outsider team research project. Epistemologically grounded in the assumption that knowledge is a human construct and thus located in an interpretive paradigm, the basis of "insider inquiry" is that researchers are participants in the situation being studied and that how insiders and outsiders work together is of major importance. In particular, our research team is composed of people who differ in their physical and psychological connectedness to the research setting and focal questions being examined. The team assumes both responsibility and shared authority for the study, meeting weekly to discuss issues and analyze the data.

Our study was conducted at two sites. We followed the process for selecting key informants suggested by Patton (1990). At the first location, a manufacturing firm in northeastern United States, informants consisted of eight female hourly workers and the female training manager. The hourly workers' perspectives were those of women engaged in the production process. At the second site, also in the Northeast, two work units were examined by the study – one provided student services and the other instructional design services. This organization provided educational services including focuses on higher, continuing, informal, and professional education. One of the researchers worked at this site as a team leader and another as an instructional designer. Worker-informants included female clerical staff and professional staff. The two sites provided an excellent opportunity for an in-depth examination of key workplace learning issues across a broad spectrum of types of work and workers.

This ongoing study began with a research team of three female adult education doctoral students and a male adult education faculty member. All four of us had interests in, and experience with, workplace learning issues. At least one "insider" was employed in each of the two work sites where we conducted our research. For this specific study, the team consisted of three members all of whom work inside one of the two research sites. Having spent four years working together within a more or less traditional insider/outsider paradigm, we were comfortable with the processes and procedures we had worked out among the four-member team and, subsequently, a three-member team. However, as we considered what critical feminist perspectives on the workplace consisted of, the underlying structure and implications of the gendered nature of organizing our insider/outsider processes came to the surface. The two female members of the research team were "insiders" and the male participant was not, highlighting the complex issues of gender, voice, and power we were struggling to understand. Within our insider/outsider group of three, we now found ourselves confronting and opening for exploration the multi-layered aspects of the gendered nature of work at this micro-level as well as through the context of this study.

At the manufacturing facility, the research team began with observing activities on the shop floor and then conducting semi-structured interviews with hourly workers. The team observed and talked to workers about their jobs, their educational background, and the ramifications of workplace training initiatives. In addition to interviews with white, middle-aged, female workers averaging seventeen years on the job, as researchers we had complete access to workers on the shop floor, observing the manufacturing process and conducting informal interviews. Interviews were also conducted with the plant training manager, the site's "insider," who was keeping a reflective journal.

Now in its fourth year (Howell, Preston, Schied & Carter, 1996; Schied, Carter, Preston & Howell, 1997; Schied, Carter, Preston & Howell, 1998; Schied, Carter & Howell, forthcoming), this particular six-month critical ethnographic study was based upon reflective journals of the researchers, participant observation, and semi-structured interviews. We collaboratively designed the study including input from some of the participants, collected data, and interpreted results. Within a critical ethnographic paradigm, journal entries were examined, evaluated, and critiqued. Participation in formal HRD classes as well as informal and incidental learning activities were observed, field notes kept, and interviews recorded. Providing a rich database, journal entries became a means of writing as a way of knowing and a way of viewing HRD practice through interaction among researchers, written narrative, and the workplace as text (Fulwiler, 1987; Giroux, 1992; Kellner, 1989). Through participant observation and interviews, researchers had available on a daily basis, and in a social context, some of the reality-constituting interpretive practices through which women made meaning at work.

Collected data were coded and themes identified first by the workers and then the three-member research group. Subsequently themes were analyzed in order to identify, describe, and interpret data with the goal of uncovering patterns of significance and discussing them at a meta-theoretical level. During and following thematic coding, Erlandson, Harris, Skipper and Allen's (1993) four areas of trustworthiness for qualitative inquiry were addressed. 1) Credibility was established through comprehensive description and analysis of the workplace and the use of multiple techniques for collecting data. Triangulation occurred through multiple sources of data and peer reviews. 2) Transferability, or the applicability of findings to other contexts, became apparent in the commonalties among the other studies engaged through this research project and multiple work locations. 3) Dependability was provided through detailed description and reflection in journals, the coding scheme documentation, and descriptions of each analytic iteration. 4) Confirmability, the process of judging the findings of a study according to the focus of the research and not according to the biases of the researchers, was established through materials and data serving as repositories and traceable sources for the assertions made. Again, data coding schemes and journal reflections served as confirmable data repositories. Findings were integrated with existing critical feminist perspectives found in adult education, critical pedagogy, and sociology of work literature.

Contradictions with Existing HRD Theory and Practice

This study identified numerous areas of contradiction between a critical feminist perspective on work and learning and the practices of Human Resource Development. Because we cannot do justice to all the issues that emerged, we would like to discuss two of them in some detail and raise others, hoping to bring these unexamined perspectives forward for future discussion and research by workplace educators.

Women and Changing Organizational Hierarchies

At both sites we observed, as is the case in many workplaces, a flattening out of organizational hierarchies. In training terms this flattening out was described by educators at both research sites in positive terms as a way to bring decision-making opportunities to those who actually do the work thus giving them ownership in the processes of work. One way this was done was to have the women themselves do the training of new hires and fit that responsibility into their already full schedules. However, the women workers were much less positive about this development. The women pointed out that in practice this meant increased work and more responsibility without any real voice in what they thought was important. For example, one woman stated that:

> I think that right now they've [management] gotten themselves in a predicament where they need people and they don't have them . . . I don't think you should be running flat out at a job and trying to teach somebody how to do it also.

In fact in our observations, reflections, and interviews we saw a consistent theme of work intensification. Clerical staff at the second site, for instance, were asked to develop and deliver training in their area of expertise without any adjustment to their ongoing job responsibilities. Moreover, the staff had no illusions about how their jobs were changing. All this discussion of empowerment and letting workers engage in the decision making process meant more work but with no recourse to refuse or even question the additional tasks and assignments.

The feminist concept of voice becomes important at this point. In this environment the only acceptable voice is a cheerful, positive one. If a woman does not exhibit those kinds of attitudes and behaviors then she is seen as deficient as a team player, a non-cooperative individual, and an employee unwilling to take the additional responsibilities of increased worker decision making. These processes are, of course, defined by the organization and reinforced by Human Resource Development courses. Thus, after being told she had been enrolled in a transformational leadership class, one woman considered questioning the course's purpose and value but had second thoughts because " . . . again, still, and seemingly forever, I'm going to be seen as negative, cynical, skeptical, uncooperative and not a team player." Another worker who was told that she was not a team player and needed to work on becoming a 'cheerleader for management' commented sarcastically, " . . . guess I better break out the short skirt and pompoms."

As we were analyzing our data, several scenarios similar to those described above materialized. We began to connect these themes with feminist literature on work and learning. Specifically, organizational flattening is part of the argument asserting that our educational systems, despite data showing workers are more highly educated than at any other time (Cyert & Mowery, 1987, Munelly, 1987), are both the cause of and the solution to current economic issues (Shor, 1986). In particular, decision-making and continuous improvement processes located throughout this flatter organizational spectrum supposedly demand higher-skilled, better-educated workers even

though the design and organization of work indicates growing numbers of de-skilled jobs which do not draw upon or emphasize the requirement, or human capacity, to think and reason (Cyert & Mowery, 1987; Hart, 1996).

Mechthild Hart's (1996) critical feminist work in the field of adult education is one source of scholarship that discussed these issues. Hart described the disturbing aspects of the feminization of poverty, particularly in terms of its relationship with the sexist division of labor. The problem, according to much of the mainstream business and HRD literature (Handy, 1984; Rothwell, 1986; Shor, 1986) consists of a poorly educated workforce exacerbated by the entry of a higher percentage of women, minorities and immigrants into the workforce. One implication is that with a lower percentage of white men in the workplace there is a less than adequate base of human capital to apply to the current issues and needs of American business. The implication, and the ideology, of this position is clearly that non-male and non-White workers are less valuable and an across-the-board equating of women's work with low-skilled labor. Ironically, skills attributed to women as "natural" (patience, attention to detail, manual dexterity) such as work with microchips have now become viewed as higher-level skills, commonly compared to brain surgery, for which men are being retrained.

In addition, flatter organizations also have the effect of pushing more work to lower levels, levels where labor is cheaper and where the workforce becomes more polarized (Hart, 1996). Although some groups of women have found more highly-skilled work, many have been forced into lower-skilled minimum wage jobs. Gender, sexual orientation, age, class, and racial lines remain the points of polarization along with unequal distribution of skills, pay, and types of positions available (Hart, 1996; Schor, 1998). Our study suggests that Human Resource Development contributes to increasing the polarization through its deployment of generic skills in courses offered to workers. Examples of these types of courses include *Negaholics: How to Handle Negativity in the Workplace*, *Defining Your Role in a Changing Office Environment*, *Time Management: Regaining Control*, and *Thinking Power*. These classes, because they place the emphasis on the individual as deficient, help to create a docile, flexible, adjustable workforce that prepares workers to be resources rather than human beings. Furthermore, such classes devalue women's experience when they specifically describe women, particularly older women, as workers who resist change and insist upon maintaining and valuing their work-related experiences over generic skills, performance reviews, testing, and categorization of tasks. Modern work organizations devalue and attempt to discard workers' need for continuity, their rooting of work in life and personal experience, their sense of self, and a connection to others – all characteristics traditionally described as feminine. Employers often use training courses to help erase these characteristics. Moreover, training in new organizational structures, such as the flatter corporation with less-secure permanent positions and growing numbers of part-time jobs, helps to solidify worker expectations for low pay, poor work conditions, fewer benefits, increasing workloads, and lack of job security. According to Hart (1992), "the new workers will be 'working like women' whose 'flexible working patterns' have already made them into the preferred labor force in many instances" (p. 98-89). We saw a strong connection between our current research and what Handy (1984) noted 15 years ago: "It is ironic that just as women have begun to win their fight to lead the kinds of lives that men lead, those lives are beginning to shift towards the pattern from which women are escaping" (p. 162).

Our previous studies as well as this study exemplify some of these points. For example, at the manufacturing facility, testing, job re-evaluation, and training deployed via the Human Resource Development unit were used to further maximize profits by creating new job classifications that kept the mostly female workforce at near minimum wage levels. In another case, when the need for product dipped, senior workers, who had higher pay levels, were sent home while temporary workers, those with a lower hourly rate, continued on the job.

Disappearing Boundaries Among Work, Family, and Community

Morgan (1997) identified three types of interests that workers bring to the workplace. The intersection of *task interest*, one's job, *career interest*, visions of the future, *extramural interests*, commitments, values, beliefs from outside work, can be illustrated with three overlapping circles. There is constant tension among the three as individuals try to balance these intersecting areas of their lives. One way to understand this overlap and resulting tension is through the concept of a community of practice, " . . . a set of relations among persons, activity, and world, over time and in relation with other tangential communities of practice" (Lave & Wenger, 1991, p. 98). Given the multiple and overlapping communities of practice to which every individual belongs, Darrah (1996) questions where the boundaries of one ends and another starts. Within the discourse of the changing workplace, there is a blurring of the boundaries between Morgan's (1997) *task*, *career* and *extramural interests*. Kofman and Senge (1993), among others, discuss the concept of "communities of commitment," commitment where there is no hard line drawn between work and life outside of work. For example, two women juggling demanding full-time jobs and the raising of young children discussed the conflict they felt between the commitment to their jobs within a

collaborative work team environment and the second job awaiting them at home each night. They commented that there was often more comfort and support within the work environment than they found at home, where they began their second full-time job at the end of the day, often stressed and always tired. Research conducted by Hochschild (1997) indicates that these are not unusual tensions, with parents often voluntarily working longer hours on the job or taking work home, resulting in *task interest* consuming larger segments of time and commitment. However, "volunteering" to work longer hours can be caused by more than simply finding the work environment more supportive than the challenge of raising a family.

Schor (1992), in *The Overworked American*, provided data on the increased workloads being pushed on employees by employers in the United States. Over the past twenty years time spent on the job by the majority of workers at all levels steadily increased. However, since 1948 productivity of workers actually doubled. To have the same standard of living as in 1948 workers would only have to work a four-hour day. Leisure has become a casualty of the market economy with increased use of part-time and contract employment. As much as twenty percent of the workforce does not have enough work to make ends meet. At the same time, the work and spend cycle of the market economy causes increased levels of stress on the job. "Surprisingly, the high-powered jobs are not the most dangerous. The most stressful workplaces are the 'electronic sweatshops' and assembly lines where a demanding pace is coupled with virtually no individual discretion" (p.11).

Hamper (1986) described work on a General Motors assembly line where workers had figured out more efficient and faster ways to get their jobs done so that two people could actually share one job. This allowed the workers to alternate, one worker performing a more intensified multitasked job, allowing the other worker some release from the boredom of the assembly line. Now this type of worker-inspired job redesign falls under the continuous quality improvement expected of all workers. Instead of the increased efficiencies providing relief for workers, work is instead intensified. Both workers must now perform furiously all day instead of only half a day. While not all researchers agree that Americans are working longer (e.g., Robinson & Godbey, 1997), a new study just released by the Families and Work Institute about the increasingly intertwined nature of work and family, and the resulting increase in stress, links these issues to a workplace that requires more autonomy, demands continual learning, and provides less security (Bond, Galinsky & Swanberg, 1998).

Senge (1990) and Watkins and Marsick (1993), address these boundary issues only in a tangential way. In theory the learning organization, the ideal organization under the new capitalism, combines personal and work-related development. The learning organization is described as "family friendly", recognizing that productivity in the workplace relates to issues of family and community responsibility. Managers in learning organizations seek collaborative solutions to conflicts between family and work-related responsibilities. Flexible schedules, working at home, and the handling of family emergencies all test the skills of managers and are described as 'problems' to be managed (Watkins and Marsick, 1993).

Organizations often have "family friendly" policies in place, but many times these benefits are not used (Gee, Hull & Lankshear, 1996). Champy (1995), an expert in reengineering, described a series of weeklong workshops held at a hotel by Arizona Public Service to develop strategies for dealing with cultural issues, the new workforce paradigm, diversity, and the integrated person.

> We're looking for what we call "breakthrough concepts" to come out of these sessions. The hundred people go to the hotel, stay there, and meet every day in a conference room. People are allowed to leave at night if they have a need. A tenet of our culture is to help people balance their work and personal lives, and we would be going against that if we didn't allow people to go home. But generally we like them to stay because the sessions often go until 10 p.m. The idea is to get everybody stimulated about the topic and working together (p. 99).

What do employees take from such a message? It is all right to use an organizations "family friendly" policies, but only if it does not interfere with work? The supposedly friendly culture claims to provide interpersonal skills development and a strong commitment to individual as well as workplace development. In actual practice, commitment in many organizations is non-existent. Senge (1990) does not attempt to create a framework to address these kinds of issues, leaving it up to the individual to determine the balance between work and family based on individual vision and goals, along with a willingness to accept the consequences. Watkins and Marsick (1993) recognize the issues involved, providing a framework to begin dealing with them. In both cases, these solutions appear to be mostly available to upper level management because it is these kinds of positions that are designed for flexibility.

Our two research sites provided cases in point. In the factory, workers had just been trained in continuous quality, the expectation of teamwork and cooperation, and the value of loyalty to the company. However, one

woman on second-shift was permitted to see her daughter - dressed and on her way to her high school prom - only during her regularly scheduled break time and in the factory cafeteria. At the second site, clerical workers discussed at length the work they now were required to do that had previously been done by professional staff and/or managers. Their additional duties were assigned without benefit of increased pay or even management's acknowledgement of their new responsibilities.

Conclusions

We believe that our study raises some compelling concerns for those involved in HRD and workplace learning. We concur with others who have found the underlying concepts of HRD to be inherently anti-feminist and possibly anti-democratic (e.g., Butler, 1997; Calas & Smircich, 1993; Fenwick, 1998a, 1998b; Fletcher, 1994; Graham, 1995; Townley, 1994; Westwood, 1985). Feminist theory and feminist pedagogies are antithetical to a practice that locates people within economic systems that see humans as resources. Thus attempting to place feminism in the context of HRD fails to address the fundamental challenges feminist scholarship poses to discursive practices located within a human capital approach to knowledge production. Moreover, the rich ethnographies of women in the workplace reveal that many of the assumptions mainstream education, training and development hold about why women work and how women work in the office or on the shop floor are flawed. The very notion of who defines what productive work is, as well as how that work is rewarded, becomes central to any understanding of work and the role of knowledge production. Failure to tap into this research leaves human resource professionals and educators with an incomplete understanding of the relationship between work, gender, and knowledge production. Potentially this failure may also lead to designing workplace learning programs that have the unintended outcome of becoming oppressive systems, hidden in the rhetoric of so-called worker empowerment.

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Self and Team Development in Practice (STP) Walk Rally

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An evaluation study was conducted to assess strengths and weaknesses of an outdoor-based experiential training (OBET) program used in Thailand. Self and Team Development in Practice (STP) Walk Rally is used as the case. Most of the principles in adult theory, experiential learning theory, and Holton's HRD Evaluation Research and Measurement Model are met by the STP Walk Rally, but it cannot promise transfer of learning. In the Thai culture, "Sanuk," or having fun, is the best element of the training design. However, face-to-face feedback is not appropriate for Thais. Recommendations for practice and research are made.

Keywords: Team Building, Adventure Learning, Thailand HRD

Self and Team Development in Practice (STP) is a variant of Outdoor-Based Experiential Training (OBET) that uses experiential learning as a technique for delivering training content such as team building, leadership, and communication. STP Walk Rally was developed for Thai employees in 1990 by Teerasak Kambannarak, Suwadee Homchanchur, and staff members from Thai Yamasaki. Since 1990, STP Walk Rally has provided services for more than 200 companies in Thailand.

Problem Statement

STP Walk Rally and other Thai OBETs have gained popularity over the last decade, especially for team building. OBET is often misused because (a) documentation in the area is based on personal accounts rather than systematic studies; (b) there is a paucity of research in Thailand in this field; and (c) there is an absence of evaluation of outdoor development programs in Thailand. The effectiveness of STP Walk Rally and other Thai OBETs has been questioned by those who believe it is just for fun since the activities look like childish games. Even though many studies have been done in the U.S. and Europe regarding these issues, they have not shown clear results. In many cases, the research designs were weak and threatened the validity of the research.

Without research on STP Walk Rally, it is hard to credit it with success. Thus, STP Walk Rally will be investigated to determine its strengths and weaknesses. There are many theories and models that could be used, but only adult learning theory, experiential learning theory, and Holton's (1996) HRD Evaluation Research and Measurement Model were selected to evaluate this particular training program.

Research Question

What are the STP Walk Rally's strengths and weaknesses in the Thai context based on adult learning theory, experiential learning theory, and Holton's (1996) HRD Evaluation Research and Measurement Model?

Outdoor-Based Experiential Training

OBET is a training process that uses experiential learning methods to deliver training content. There are three types of general OBET programs: challenge courses, group initiatives, and wilderness travel activities. The differences between general OBET and the STP Walk Rally as used in Thailand will be described in this section.

Kolb (1993) described challenge courses or high ropes courses as consisting of a series of activities conducted in trees or on poles. The objectives of these courses are to develop self-confidence, to help individuals

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confront fears and to increase their propensity for risk taking. Group initiatives, or low ropes courses (Baldwin, Wagner, & Roland, 1991), consist of a series of group problem-solving activities. Baldwin et al. (1991) indicated that low ropes courses create changes in group climate but do not change self-concept. The third type, wilderness-based activities, is presented as a multi-day expedition. The objectives of wilderness programs are team building, communication, trust, and group cohesion.

Most of the activities in Thai OBET are a combination of low ropes and wilderness-based activities, not high ropes activities. The expected results from OBET are team building, communication, problem solving, and group cohesion, rather than self-development. STP Walk Rally was originally used for team building only. Later, the program was applied to new employee orientation, improving job satisfaction, and improving participants' skills in areas such as leadership, management, and decision making. These objectives are different from most U.S. OBETs' objectives. In the U.S., OBET is often used for individual development and to increase self-esteem (Wagner, Baldwin, & Roland, 1991).

OBET has many other names. In this article, OBET will be used to represent any outdoor-based experiential training. "Walk Rally" is the most popular word for OBET in Thailand. In this article, STP Walk Rally will be used to refer to the specific STP program, while OBET will be used to refer to the general training approach.

OBET programs vary substantially from trainer to trainer. Ibbetson (1993) stated that the essence of OBET is to use simulated outdoor initiative activities as direct metaphors for many everyday occurrences. In this paper, OBET means a process that uses hands-on challenges or adventures, usually in the outdoors, combined with review and feedback, to improve workplace performance.

STP Walk Rally

STP Walk Rally is an experiential training program intended to enable trainees to have insights through learning by doing. Kijyanyong (1997) defined "Walk Rally" as an activity that provides trainees with self-experience and self-learning under competitive situations. STP Walk Rally is adapted from European Orienteering, Group Dynamics, and Japanese Walk Rally.

Orienteering

"Orienteering is land navigation by the use of a topographical map and compass" (NAGWS, 1976, p. 162). In STP Walk Rally, maps are used to direct the walk. To win the rally, participants have to work in teams. They are expected to help each other by reading the map and controlling the time. Teams have to get to checkpoints at a specific time.

Group Dynamics

Group Dynamics is the study of the interrelationships between participants of a group, how the group is formed, and how it reacts to other groups. Mathes (1968) stated that group dynamics describes what is happening in all groups at all times whether or not the participants recognize it. In STP Walk Rally, participants' behaviors are videotaped and are observed by facilitators. The tapes are played back to the participants. The participants are then encouraged to give feedback on their feelings and the changes that they have seen during the course.

Japanese Walk Rally

Shigeru Kobayashi developed a teaching technique called Walk Rally in the 1960s. Japanese Walk Rally is an OBET program that enhances collaboration and team building. The participants are divided into teams of about 8 to 10 people. The participants on each team are paired and each pair works together to obtain a score. The pairs' scores are added to get the team's total score. The team that has the highest score wins. This same system is used in the Thai STP Walk Rally.

STP Walk Rally's Characteristics

The main objectives of STP Walk Rally are to have participants learn through experiential learning activities how to develop themselves, as well as how to understand other people in order to work together. These

objectives are similar to the T-Group objectives that focus on learning about self and others (Rothwell, Sullivan, & McLean, 1995).

Each STP Walk Rally session consists of 40 to 50 participants. The participants should represent a variety of ages, genders, functions, and positions within a company. The program takes three days, including one day of traveling because the program is held at a remote site. However, STP Walk Rally can be tailored to meet the needs of different organizations or groups. STP Walk Rally can be divided into two phases: classroom training that prepares the participants to work in teams and experiential activities with participant involvement.

Phase I. In the half-day classroom-training phase, an instructor presents information about team building. Participants work in teams to set goals and objectives for their teams. Trainers use ice-breakers, games, psychological tests, and indoor experiential learning activities as alternative facilitation methods.

Phase II. Th experiential phase lasts one-and-a-half days. In this session, STP Walk Rally serves as a vehicle for practicing skills learned during Phase I. There are two rounds of walks. Before the first round, each team receives a map, time sheet, and set of rules. On the map are hints written in poems to lead the team from one checkpoint to the next. The team members decide which direction they should go. At each checkpoint, all team members have to report to a Walk Rally facilitator. They are presented with a challenge. Each team has to complete the challenge before they proceed to the next point. The participants' behaviors are videotaped. At the end of the walk, participants are given an hour to reflect on what they have learned. This is followed by a debrief session with STP facilitators. The winning team is announced and presented with a trophy.

The second round of the Walk Rally starts on the last day. Participants remain in the same teams. The second round is similar to the first round, but it has different activities and checkpoints. The challenges are more complicated. At the end of this session, debriefing is again provided. Participants are given time for self-reflection. They exchange feedback in person with their team members, thanking them and telling them what they would like them to improve in the future. From personal experience, most of the feedback is positive. There are two trophies for the second round, one for the winning team and one for the most-improved team.

STP Walk Rally Evaluation

Since no research has been done on STP Walk Rally, it is difficult to assess whether or not the program can bring about change in participants and their organizations. Adult learning theory, experiential learning theory, and Holton's (1996) HRD Evaluation Model are used to evaluate STP Walk Rally.

Adult Learning

Cross (1982) stated that people working in adult learning situations should apply four fundamental principles.

1. Present new information only if it is meaningful and practical.
2. Present only one idea or concept at a time--to help adults integrate it with their existing knowledge.
3. Present information in a manner that permits mastery. Adults maintain the ability to learn throughout their lifetime.
4. Use feedback and frequent summarization to facilitate and foster retention and recall.
5.

Applying Cross's first principle, throughout the course, information is presented at an appropriate time. Participants might not understand what is going on while experiencing the activities. Trainers help participants search for answers by themselves. However, the activities in STP Walk Rally are contrived and artificial. As none of the activities in STP Walk Rally occur in real life, the feedback received may not be very meaningful.

As to the second principle, in the debriefing sessions, the participants are asked to integrate what they have learned and how they can use their learning in the workplace. Contrary to the principle, many ideas are presented at a time in the debriefings. Participants might be confused by trainers' references.

For the third principle, experiential training encourages participants to learn at their own pace. Participants of different ages are able to take this course at the same time. However, competition in the STP Walk Rally is contrary to this principle as mastery allows everyone to succeed. Becker (1998) stated that the downside of using games in training is that games tend to spotlight inequalities among participants' verbal skills, physical coordination, or intellectual prowess. "They create winners and losers, and the losers remember it" (p. 79).

For the last principle, videotaping can be a great tool for giving feedback. It has recorded the actual reactions of the participants that might differ from their recollections of the activities. However, the feedback is not provided frequently. There are only two debriefings during the three-day training.

Experiential Learning

Kolb and Fry (1975) presented an experiential learning cycle. The cycle includes (a) concrete experience, (b) observation and reflections, (c) formalization of abstract concepts and generalizations, and (d) testing implications of concepts in new situations. This cycle is continuous because the last step, involving the application of learned concepts, leads to new concrete experiences and the beginning of another cycle.

STP Walk Rally uses the experiential learning cycle for designing the activities in Phase II. This cycle includes (a) having the experiences on the first-round walk; (b) observing and reflecting on the experiences through the videotape and comments by staff and participants; (c) debriefing or analyzing the experience by discussing thoughts and feelings about the relationship of the experience to real life; and (d) applying the results of the analyses to the second-round walk. The two-round walks, videotape reflection, and debriefing make the STP Walk Rally a complete variant of the experiential learning cycle. However, some companies ask for one-round of the walk only, which is contrary to the continuous cycle concept.

It is clear that experiential learning is a participatory approach to training in which learners do things rather than sit and listen to a lecture. Bruner (1996) stated that some things are learned best by actually doing them. Much research has been done comparing the effectiveness of experiential training with that of traditional classroom training. Lumlert (1994) conducted research on the efficiency of Walk Rally training in the Electricity Generating Authority of Thailand. According to her research, Walk Rally training improved trainees' decision making, self-control, and planning skills, while traditional classroom training improved only decision making. However, this research did not conduct pre-test assessment.

Hayward suggested that using a combination of outdoor courses with some classroom training works best (in Fryberger, 1995). Lee and Caffarella (1994) claimed that in-class activities can facilitate the synthesis between background knowledge and new knowledge to the extent that the activities encourage active reflection or problem solving, especially if they are highly interactive. STP Walk Rally has a combination of classroom training and outdoor activities.

Dewey (1929) argued that "it is wrong to see experience as the easy way to learn" (p. 6). However, in experiential learning learners experience real feelings and emotions (Clements, Wagner, & Roland, 1995). STP Walk Rally activities require trainees to commit themselves to team success. With no role-playing, there is no place to hide from one's feelings (Fryberger, 1995). Yet none of these activities occurs in the workplace.

Holton's HRD Measurement Model

Holton's (1996) measurement model is a contemporary evaluation model that has only three outcome measures: learning, individual performance, and organizational results. The first outcome, *learning*, is influenced by trainee reaction, motivation to learn, and ability.

1. *Trainee reaction* plays a critical role in STP Walk Rally. Adams (1997) cited much research about adult play from anthropology, psychology, and education that indicates that play is an important mediator for learning and socialization throughout life. "One way to actively engage learners is to use play in training and development programs" (p. 881). Many groups of participants prefer playing games to sitting for lectures.

Thai people want "sanuk" (play) through games and experiential activities instead of boring traditional classroom training. Komin's (1990) study in Thailand found that fun-pleasure values function as the imperative mechanism as a means to support and maintain more important interpersonal interaction values. Fun is a part of the STP Walk Rally program. However, fun cannot guarantee that participants will learn more. In addition, it is not easy to involve every trainee in playing every activity.

2. *Motivation to learn*, according to Holton (1996), has a direct relationship with learning. The four variables that influence the degree of motivation are readiness for the intervention, job attitudes, personal characteristics, and motivation to transfer learning. Motivation to transfer will be discussed in the performance outcomes section. One way to improve the intervention readiness for STP Walk Rally is to present the list of things that participants should prepare before attending the course. For example, the trainees should bring comfortable clothes and shoes and have a medical examination.

Job attitude and personal characteristics are independent variables that can affect training success. If the trainees have positive job attitudes, it is likely that they will be more motivated to learn and will have better training

outcomes. Personal characteristics, such as self-efficacy, locus of control, and need achievement, have been shown to influence motivation to learn. On the other hand, there is much research on OBET that has attempted to measure without much success these three characteristics as training outcomes (Kolb, 1993; Parker, 1992; Robitscheck, 1993; Taragos, 1993). Without a pre-test, no one can assume that these three characteristics are training outcomes.

3. *Ability* has a direct impact on learning. Holton (1996) noted that heterogeneity in groups' cognitive abilities tends to influence positively training outcomes. Recognition of this is built into the structure of the STP Walk Rally groups as well. The participants normally come from different departments in a company.

The second outcome, *individual performance*, is influenced by motivation to transfer, transfer climate, and transfer design. *Transfer motivation* falls into four categories: intervention fulfillment, learning outcomes, job attitudes, and expected utility. Expected utility will be discussed in the organizational results section.

Intervention fulfillment and job attitudes are independent factors that are beyond the control of training management, but they are considered to be influences on performance outcome. *Transfer climate* and *transfer design* are met by debriefing in STP Walk Rally which helps participants yo apply what they have learned in the workplace. However, in the Thai culture, debriefing, which includes criticizing participants in front of each other, is difficult for Thais. "Face-saving" and "kreng jai" or "ego preserving" are key criteria in relationships. As a result, straightforward negative performance feedback, strong criticism, and face-to-face confrontation techniques must be avoided (Komin, 1990). Becker (1998) presented two incidents in which people who lose face experience significant consequences, leading to decreased learning and withdrawal, antagonism, and sabotage.

The third outcome, influences on *organizational results*, is linked to organizational goals, expected utility or payoff, and external factors. STP Walk Rally has both strengths and weaknesses in this area.

1. Linkage to *organizational goals* can be done from the beginning. Front-end analysis must begin with organizational analysis to identify the highest priority opportunities for performance improvement (Swanson, 1994). STP Walk Rally provides both interviews and questionnaires for the client as a form of training needs assessment. However, the organizational analysis is not required for every company. Further, a comprehensive analysis might well lead to interventions other than STP Walk Rally.

2. *Expected utility or payoff measure* is recommended to determine whether or not the OBET program is a warranted investment of resources. Swanson and Gradous (1988) suggested that financial benefits should be forecasted before the intervention begins. The result of the STP Walk Rally could be measured in terms of financial benefits, but this has not been done. Reduction in absenteeism and employee turnover and improvement in productivity can be calculated as financial benefits. Also, the psychological benefit or quality of work life during and after training should be considered as a return of investment (ROI). Ewert (1989) agreed that the goal of OBET is not only to improve an individual's physical performance but also to enhance the person's cognitive, attitudinal, and behavioral skills to achieve lifelong physical and emotional well-being. Currently, organizations in Thailand consider encouraging employees to become "khon-kheng khon-dee," intellectual and moral persons (Kampu-Na-Ayuthaya, Na-Chiangmai, & Thongwiwat, 1993).

3. As *external factors* outside the realm of training can affect the organizational results, they need to be identified and controlled for in the design.

Recommendations for Practice

Designing experiential training is not an easy task. The following are some recommendations for future development of STP Walk Rally in Thailand.

- Because of kreng-jai (ego-preserving) and face-saving, participants may be more comfortable in giving feedback by writing a diary to reflect on their thoughts and feelings and by providing written feedback.
- STP Walk Rally seems to lack mechanisms for shaping the participants' future. Using scenarios is recommended. A scenario is "a tool for ordering one's perceptions about the future environments in which decisions might be played out" (Schwartz, 1996). Participants should have opportunities to think about how they can transfer what they learn to the workplace.
- The course should not be the same every time because each client company has different needs and culture. The program should be tailored for the individual client. Also, the activities should be altered to meet specific objectives. Organizational analysis is a must.
- The trainer should play a key role in developing both individuals and the organization. Rothwell et al. (1995) recommended that the trainer's role be broadened to include consulting with participant organizations to ensure organizational support for improved performance after training. Otherwise, the performance cannot be maintained for very long.

- Evaluation is needed for improvement of the program. To determine the impact of the participants' characteristics on experiential learning, pre- and post-test evaluation should be provided to measure the real training effect. To protect against post-test euphoria, the post-test should not be conducted right after the training. STP Walk Rally to date has used only post-test evaluation.
- At least two rounds of the STP Walk Rally should be run each time. Trainers should refuse to run one-day sessions.

Recommendations for Research

There is a paucity of research in Thailand in this field. Both qualitative and quantitative research studies are recommended. Miner (1993) found different results from qualitative and quantitative methods on team building through experience-based training. Nonparticipant observation and other qualitative methods suggested that training had a strong impact on participants and on the company. However, quantitative research found that the training did not result in significant differences. In contrast, Reina (1995) found that both quantitative and qualitative results partially supported the hypothesis that physical touch in the context of adventure training within work teams significantly and positively impacted trust. Thus, both research paradigms are necessary and useful.

An experimental research design is highly recommended to include both pre- and post-tests. Most research on OBET uses only a pre-test. Moreover, follow-up tests should be provided to confirm learning outcomes and to protect against post-test euphoria. Ibbetson (1995) provided evidence that a team development intervention had an immediate, short-term, positive effect on the group as a whole but had no long-term effect. Wagner and Roland (1992) noted that programs with long duration would allow a better comparison.

Conclusion

STP Walk Rally seems to have both strengths and weaknesses based on adult learning theory, experiential learning theory, and Holton's HRD evaluation and measurement model.

The STP Walk Rally's strengths are (a) activity design that encourages participants to learn at their own pace; (b) learning cycle that (usually) completes the experiential learning cycle; (c) a learning setting that combines an outdoor course with classroom training; and (d) fun during the training that creates a better learning environment. However, fun cannot guarantee that participants learn.

Weaknesses in the STP Walk Rally are (a) STP activities that do not occur in real life; (b) competition that creates winners and losers; (c) time consuming; and (d) debriefing that criticizes in front of others. In Thai culture, face-saving and "kreng jai" are common attributes that cannot be ignored during the debriefing.

Without needed research on STP Walk Rally, it is difficult to credit it with success. Before such an analysis takes place, the basic design of STP Walk Rally needs to be modified based upon this analysis so that it more closely matches what is already known through theory.

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Human Resource Development's Contribution to Strategic Service Quality Performance in Radisson Hotels Worldwide

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This partnership study between the University of Minnesota and Radisson Hotels Worldwide illustrates the strategic alignment and contribution of HRD to service quality. In this case study twenty-nine Radisson Hotels Worldwide tested a service guarantee performance improvement program that included a primary HRD component throughout. In just three months, many of Radisson's service quality performance measures in these hotels improved significantly.

Keywords: Service Quality, Hotel Industry

Human Resource Development (HRD) has been defined "... as a process for developing and unleashing human expertise through organization development and personnel training and development for the purpose of improving performance at the organization, work process, group, and individual levels." (Swanson & Holton, 1999). In addition, HRD is thought to have three potential strategic roles (Torraco & Swanson, 1995).

- HRD being Performanced-Based
- HRD having Strategic Capability
- HRD contributing to Emergent Strategy

The strategic performance challenge to HRD is its connection to the existing or emerging strategy of an organization. This case study reports the strategic connection and contribution of HRD to service quality performance in a major hotel chain. The central idea was to (1) explore the concept of a service guarantee and to establish such a guarantee for customers and (2) to prepare managers and staff with the organizational service learning (knowledge and expertise) required to implementing the strategic initiative.

The paper begins with a description of the theoretical framework of service guarantees followed by the case study framework and problem statement. The next section presents the methodology of the study followed by the results and conclusions.

The Service Guarantees Concept

Hart (1988, 1993), Hill (1995) and others (Haskett, et.al.) have argued persuasively that service guarantees can help many firms to position themselves in the market by clearly defining their value proposition to customers and employees. Service guarantees also "stress" front-line workers to deliver high-quality service the first time, encourage customers to voice their complaints to the firm, and motivate and enable workers to quickly discover and recover dissatisfied customers.

Hays and Hill (in-press) developed a model (Figure 1) to show how service guarantees affect service quality and, ultimately, business performance. In this model, they argue that a strong service guarantee improves customer satisfaction, service quality, and customer loyalty (SQL) through three intervening variables: Marketing Communications Impact, Employee Motivation and Vision, and Organizational Service Learning. These are defined in the following paragraphs.

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Marketing Communications Impact

(MCI) –A strong service guarantee is intended to have both offensive and defensive marketing impact. Offensively, firms can use a service guarantee to proclaim the reliability of their high quality service and thus attract new customers. Defensively, a service guarantee not only enables companies to recover unsatisfied customers but also encourages dissatisfied customers to complain, thus allowing the firm to recover those customers.

Employee Motivation and Vision (EMV)

A strong service guarantee was intended to motivate employees to fulfill the guarantee and to satisfy customers. The guarantee clearly defines the employee's job as satisfying customers – not just taking reservations, checking out customers, or cleaning rooms. It can also inspire a new vision for service quality when employees are challenged to really satisfy customers' true needs.

Organizational Service Learning

(OSL) – A strong service guarantee can help organizations discover dissatisfied customers and learn from them in order to improve service quality. Organizations with a strong service guarantee will tend learn how to satisfy customers faster than organizations without one.

When marketing communications impact (MCI), employee motivation and vision (EMV), and organizational service learning (OSL) are improved, then service quality, customer satisfaction, and customer loyalty (SQL) should also improve. Business performance (BP) will improve as a result of improved SQL.

Figure 1. Service guarantees and business performance

Marketing communication s impact (MCI)
Service guarantee strength (SGS)
Employee motivation and vision (EMV)
Organizational service learning (OSL)
Customer satisfaction Service quality Customer loyalty (SQL)
Business performance (BP)

Case Study Framework and Problem Statement

Carlson Companies, Inc. is one of America's largest privately owned corporations with total system sales of $13.4 billion in 1996 and $20 billion in 1997. Carlson Companies employs about 130,000 people worldwide, including those who work in franchised and managed operations.

Radisson Hotels Worldwide and its parent, Carlson Hospitality Worldwide, include more than 500 lodging locations in 49 countries. Under the leadership of its former president, Radisson's strategy focused on growth and the firm added hotels at the rate of about one hotel every seven days. By 1997, Radisson's "growth at any cost" strategy left Radisson with a significant diversity in hotel quality and an "unfocused" brand image. Alignment with hotel owners (more than hotel guests) also seemed to cause Radisson's customer service and hotel management expertise to atrophy.

In 1997 and 1998, Radisoon took several initiatives to drive the organization towards becoming a more customer-focused brand. In their words, they "re-discovered that their primary customers should be the guests -- not

the owners." Some of these initiatives included a service guarantee human resource development program, a guest satisfaction measurement program, an employee satisfaction measurement program, and an information technology initiative. Radisson was committed to creating the systems and programs that would bring Radisson into the 21-st century as a "customer-driven learning organization." Their goal was to make Radisson the "most trusted and respected brand worldwide." They were hopeful that these initiatives would make a significant contribution to helping Radisson achieve these goals.

This paper focuses on the question of results from a service guarantee initiative having policy and HRD components, the strategic service quality performance metrics that support the implementation, and evaluation of that initiative, and a resulting measures of performance drivers.

The Service Guarantee Design

Hart's 1993 book prescribes an "unconditional satisfaction" guarantee where the firm responds to any and all service failures with some sort of immediate compensation. In focus groups conducted by Radisson, customers found it uncomfortable to receive a full refund for a minor complaint; giving away room-nights too freely actually discouraged customers from voicing their complaints. Radisson's management team decided that a more appropriate guarantee would be a two-step guarantee that allowed Radisson to "make it right" before the hotel offered the customer a full refund. Focus groups confirmed that this was a good balance between encouraging customers to voice their complaints and assuring customers that their complaints would be taken seriously.

In this case study twenty-nine Radisson Hotels Worldwide tested a service guarantee performance improvement program. The pilot hotels implemented the guarantee with a complete HRD program but with no publicity. The guarantee read simply:

If you aren't satisfied with something, please let us know and we'll make it right or you won't pay.

Service Quality Performance Metrics

Four service quality performance driver metrics were used in this case study (see Holton, 1999 and Swanson & Holton, 1999):

- *Willingness to return* -- percent of customers who indicate that they are willing to return.
- *Percent advocates* -- percent of customers who indicate a willingness to recommend Radisson Hotels to others.
- *Percent defectors* -- percent of customers who indicate that they are unwilling to return.
- *Percent complaints* -- ratio of complaints to room nights.

Information systems, under the leadership of Radisson's Vice President of Knowledge Resources produces a "dashboard" for each hotel that includes these as well as financial measures. The one-page dashboard is essentially a "balanced scorecard"[1] for each hotel. These measures are often supplemented with *ad hoc* marketing research.

HRD Contribution

HRD in the forms of employee training and involvement were key aspects of the service guarantee program at Radisson. A comprehensive training program, complete with training manuals and videotapes, was developed to support the guarantee program. Radisson managers and employees were required to participate in the training program before the hotel could implement the guarantee program. An involvement program before, during and after the training consisted of regular communication and employee input sessions.

The involvement included systematic and regular communication through management memos, employee newsletters, and face-to-face meetings as well as substantial opportunities to suggest changes and actually modify the program rollout strategies and supporting materials.

Training programs first involved the certification of 29 top managers to serve as trainers of key site personnel. The connection of managers-to-managers in the learning (and ultimate networking process) was essential is backing up the general concept with the knowledge and expertise required to execute the service guarantee. The training design was highly interactive and supporting materials in the forms of videotapes and simulations played important parts in supporting the managers-turn-trainers.

Methodology

In order to test the "100% Guest Satisfaction Program," Radisson selected twenty-nine hotels for a "pilot" test of the 100% Guest Satisfaction Program. These hotels represented a wide variety of hotel types, locations, and sizes.

The impact of the service guarantee was measured using three approaches: (1) Radisson's internal data from room comment cards to measure the service quality metrics discussed above, (2) a customer survey conducted by a market research firm, and (3) a University of Minnesota study of employee motivation.

A team of researchers from the University of Minnesota developed a survey instrument based on the EMV and OSL theory in Figure 1 and administered it to both managers and front-desk workers in each of the twenty-nine pilot hotels. Table 1 presents the items (questions) that made up the survey. The actual survey randomized the questions. Respondents were asked to score each item on a 7-point "agree-disagree" scale.

Of the twenty-nine hotels in the pilot study, four were excluded from the survey data analysis because they were not in the United States or Canada. Two additional hotels were excluded because service quality performance data were not available. With Radisson's help, the survey had a 100% high response rate for the twenty-four remaining hotels in the sample.

The researchers administered a survey to both management and front-desk hotel employees before and after the service guarantee policy and employee training was implemented in the test hotels. The survey found statistically significant correlation between a new service quality metric called "employee motivation and vision" (EMV) and Radisson's service quality performance metrics.

Results

The average change for each variable is also shown in Table 1. The "before" data was taken at the start of the program and approximately six months "after." Fourteen of the sixteen variables showed improvement. The improvements marked with an asterisk (*) had statistically significant improvement. Five of Employee Motivation and Vision (EMV) items showed significant improvement with the service guarantee program. Two of the OSL-Discovery variables improved significantly. However, none of the OSL-Data or OSL-Improvement items was statistically better. It may be possible that OSL variables lag EMV variables and, therefore, OSL improvements were not detected in the study.

Service Quality Performance Metrics

A study of Radisson's four service quality performance metrics found that the willingness to return increased, percent advocates increased, and percent defectors decreased; The percent complaints increased significantly during the first four months of the pilot program. Management concluded that the service guarantee encouraged dissatisfied customers to voice their complaints, and viewed this as a positive result.

A more sophisticated statistical analysis found a statistically significant relationship between the sum of the EMV scores, the sum of the OSL scores, and the percent advocates metric. In other words, customer satisfaction (measured by percent advocates) is strongly affected to employee motivation and vision (EMV) and the firm's ability to learn from its customers (OSL) as measured by the survey instrument.

Conclusions

While many scholars and practitioners might view a service guarantee program as only a marketing strategy, this study approached this performance improvement effort as a more fundamental system change. In this case the conclusion was that a service guarantee program that holistically thinks about customers, mission, policies, and the people that must ultimately understand and carry out the new approach can significantly shape the operations strategy of a firm as well. Radisson's service guarantee, *implemented with sound HRD theories and practices,* had a positive influence on the motivation and vision of employees, their knowledge and expertise, and increased service quality and customer satisfaction.

A service guarantee program can also provide the impetus for a firm to focus operations on the attainment of superior service quality through learning from service failures. In this case, the service guarantee and HRD's contribution were viewed as both strategic and a sound financial investment.

In just three months, many of Radisson's service quality performance measures in these hotels improved significantly. Customer satisfaction, measured by Radisson's own metrics and by a market research firm, showed increased "willingness to return" and "percent advocating the hotel." Radisson also found that the guarantee decreased employee turnover, increased utilization, and increased profitability for the hotels where service guarantee program was pilot tested

With respect to strategic performance measurement, this paper illustrates an interesting application of strategic quality measures. The paper also provides evidence that the survey instrument can be used as a service quality *performance driver metric* (see Swanson & Holton, 1999) to measure employee motivation and vision construct (EMV) and organizational service learning (OSL).

Table 1. Employee Survey Results

Construct	Question	Average improvement
EMV Motivation		
	1. Our employees always make customer satisfaction their top goal.	.121
	2. Our employees go out of their way to listen when customers complain.	.210*
	3. Our employees try very hard to fix customer problems when they know about them.	-.026
	4. Our employees feel a strong sense of accountability and ownership for service quality.	.236*
	5. Customer satisfaction is an extremely important part of my job.	.117*
EMV - Vision		
	1. Our service quality priorities are always clear to our employees.	.342*
	2. Our employees have a clear understanding of the role that service quality plays in helping our company compete in our market.	.107
	3. We have very well defined standards for service quality.	.269*
OSL - Discovery		
	1. When a service problem occurs, we are almost always aware of the problem.	.291*
	2. Our employees are very aware of customer complaints and why they occur.	-.006
	3. Customers with a service problem almost always complain to us.	.345*
OSL - Data		
	1. We have accurate information on how many complaints we receive.	.167
	2. We have accurate information on why our customers complain.	.076
	3. Information on customer satisfaction trends is communicated to all of our employees.	.212
OSL - Improvement		
	1. Collecting customer feedback helps us to regularly improve our service quality.	.064
	2. We have improved our service quality over the past year based on customer complaint information.	.009

** Statistically significant at the .10 level of significance.*

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Mastering Turbulent Growth: A Growth Audit at a Major Pharmaceutical Research Center

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The failure of organizational growth initiatives has been linked to the inability of organizations to adequately address the HRD implications of strategic growth. In this study we present a model for conceptualizing the nature of organizational growth and provide a case example of how this framework was applied as a diagnostic tool within a major pharmaceutical research center. Results showed that the model revealed and clarified the human resource implications of the organization's growth strategy. Further, the results of the case study validated outcomes anticipated by the model, specifically, growth pattern recognition and causal mapping of growth.

Keywords: HRD, Strategy, Audit

Radical, disruptive, and innovative growth is not just a compelling aspiration for organizations, it is a requirement. Increasing options available to stakeholders, decreasing switching costs, and heightened expectations of investors, customers, suppliers, and employees all combine to make growth an imperative. However, accompanying the growth imperative is the growth conundrum. The process of growth that many organizations follow is filled with contradiction, inconsistency, and paradox. While companies may take actions *inconsistent* with their growth goals and still be successful, others may take actions *consistent* with their growth objectives and suffer disastrous losses.

Imbedded within this is the fact that the vast majority of growth strategies fail. Many point to the lack of attention to the human factors. And, while there is significant evidence that attention to human resource development issues is critical to successful growth, there is a dearth of models to effectively describe this relationship. The purpose of this research is to develop a model for linking growth strategy to HRD. This model is designed to help organizations understand the impact of HRD on their ability to implement growth strategies. We then tested the model as a tool for diagnosing HR supports and barriers to growth and for developing action agendas.

Review of Literature

Organizational Growth Strategies

For most organizations, radical growth has become a requirement, or as stated by Druckman, Singer, and Van Cott (1997) "Organizations today must function and attempt to flourish under conditions that are complex, rapidly changing and in some respects unprecedented. Voluntary mergers and joint ventures, hostile takeovers and poison-pill resistance to them, conglomerations and divestitures have created an organizational environment of prolonged turbulence." This requirement has been driven by many forces. Investors are increasingly requiring greater returns, evidenced by the radical jump in P/E ratios of stocks today with some carrying unprecedented P/E ratios of over 200. Employee requirements are also driving radical growth. Low unemployment, especially in technology fields, are driving organizations to offer increasing compensation and opportunities (Worth, 1998). For example, a recent study shows that additional compensation in the form of equity ownership has radically increased over the past decade, from less than 2% to more than 8% of total US corporate equity (National Center for Employee Ownership, 1998). Customer demands are also driving radical growth. The volatility of the organization's customer base increases pressure to continually enhance the options, features, and benefits to customers through product innovation and value added service (Bund-Jackson, 1985). Reichheld (1996) has shown that retention of customers is predictive of growth in market share and stock price.

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Despite this increase demand for radical growth, several studies have shown that a large proportion of organizational growth strategies has failed. For example, a McKinsey study (reported in Druckman, Singer, and Van Cott, 1997) suggests that 67 percent of large scale TQM efforts failed within two years. Similarly, a Rath and Strong survey (also reported in Druckman, et al, 1997) indicates that only 20 percent of organizational growth strategies achieve their objectives. The American Quality Foundation and Ernst and Young (Ernst and Young, 1992) reported that 95 percent of strategic initiatives studied failed to provide lasting value to the organization. Pare (1994) found that as many as half of all mergers and acquisitions are financial failures.

In all of the studies cited above, the most frequent cause noted for the failure has been the "people factor." Organizations are not paying enough attention to the complexity and extent of the transitions employees must endure to implement growth strategies. Organization's abilities to develop complicated strategies have outpaced their capabilities for implementing these strategies. For example, in a study of mergers and acquisitions within the pharmaceutical industry over the past 30 years, lack of attention to overlap in work responsibilities, incompatible corporate cultures, and lack of communication were associated with a decrease in market share for the combined firms (Economist, 1998a). Several studies have shown that when layoffs are not tied to a specific strategy companies experience a decrease in revenue and stock prices fall, (even when the stock goes up after the initial announcement (Lashbrook, 1997; McKinley, Sanchez, and Schick, 1995). While difficult to quantify, studies have also shown that failure to attend to organizational culture and values as a company grows will create a barrier to success (Druckman, 1997).

While there is strong evidence of a close link between organizational growth strategy and human resource development, there is a decisive lack of models to describe it. The organizational growth literature consists of a series of practices; re-engineering, TQM, strategic partnerships, mergers, acquisitions, downsizing, etc. What is lacking is a coherent model for examining the contribution of human capability to creating and implementing growth strategies. Or, as stated by Druckman, et al (1997) "There is even a lack of descriptive taxonomies to provide a framework to carry out the research." Therefore, The purpose of this research is two fold; one, to develop a preliminary framework for understanding the link between organizational growth strategies and human capabilities, and, second, to test the utility of this framework in an organizational setting. This second step is essential. To develop a model without presenting some test of its validity or utility does not, in these authors' opinion, further the advancement of the field in a meaningful way. While a test of the accuracy or validity of the model is most desirable, we have chosen to present a case study where the model was applied to help understand and address the human resource implications of a strategy to create exponential growth.

Growth Domains

There are multiple pathways to achieving growth. As a result, organizations are abandoning linear approaches that limit strategic options. Strategies that allow for a more holistic or scenario based approach are more appropriate for today's business environment (van der Heijden, 1996; Brandenburger and Malebuff, 1997). To this end, we examine the literature on organizational growth to identify the principle pathways, or domains in which growth occurs. Growth was defined multi-dimensionally; revenue, profitability, number of employees, market share, and stock price. We found four principle areas in which organizations focus resources to achieve growth. We called these: Marketplace, Network Enterprise, Organization, and Individual, constructed around four critical stakeholder classifications.

Marketplace. Achieving growth by focusing on customer requirements is a common concept. Identifying new markets or niches, expanding globally, and enhancing product to meet changing customer requirements are all elements of the Marketplace domain. Marketplace strategies are not effective for all organizations. For example, Ernst and Young (1992) found that strategic planning that focused on defining the companies value proposition, customer performance assessments, and market share and product quality audits are effective only for organizations trying to move from market performer to market leader.

Network Enterprise. Growth through strategic partnerships has become a wide spread practice in recent years. While mergers and acquisitions are historically common, strategic alliances, preferred vendor relations, and multi-enterprise collaborations are increasing in frequency. These relationships are being driven by global competition, scarcity of resources, and the need to share costs and risks (Fedor & Werther, 1995; Druckman, et al 1997). Successful collaborations are those with a clear purpose for the collaboration,

have compatible leadership styles and cultures, and create systems for effective reciprocity in information sharing (Sanker, Boulton, Davison, and Snyder, 1995; Oliver, 1990).

Organization. Creating growth through restructuring and the re-allocation of resources has been the focus of TQM and process reengineering efforts for several years (Ernst and Young 1992; Hammer and Champy, 1993; Rummler and Brache, 1991). The investors or management (as a proxy for the owners) are the principle stakeholders connected to the Organization Domain. Growth in this domain has become more important with the increased role of technology in business. For example, research indicated that one of the greatest barriers to growth is the incompatibility between the technology professionals' requirement for autonomy and organizations' requirement for some kind of control mechanism (Huber, Miller, and Glick, 1990). Also related to the Organization Domain is the topic of culture and values. While its impact on organizational growth is difficult to quantify, it is widely accepted that failure to attend to cultural issues can create significant barriers to growth, and growth can be enhanced by the careful nurturing of a performance oriented culture (Schein, 1992; Druckman, et al 1997).

Individual. Finally, organizations will seek growth by building the capabilities of individuals within their workforce. While organizations have long been involved in enhancing skills through training and development, the notion of leveraging superior human or intellectual capital to gain competitive advantage is now being recognized. This is in part due to increases in knowledge work (Cleveland, 1985). As recently as 1960 half of the US workers were directly involved in the manufacture of tangible products. However, it is estimated that by 2000 no developed country is likely to have more than one-eight of its workforce so employed (Druckman et. al, 1997). The effectiveness with which organizations build new skills, involve employees in the growth process, and create an environment of commitment all have significant impact on an organization's ability to grow (Kotter, 1995, Reichheld, 1996).

Growth Dynamics

Organizational change and growth occur when organizational boundaries change (Druckman, et al 1977). While there is no universal formula for producing effective organizational change, there is a finite and consistent set of dynamics that organizations can use as tools to create and mold change within the four domains. We have classified these dynamics into three types: Permeability, Elasticity, and Momentum.

Permeability. Permeability represents the processes organizations utilize to support and control the exchange of inputs and outputs. The term permeability implies that effective growth is a process of selectivity. In other words, growing organizations must effectively consider and manage new ideas that enter, as well as the information and ideas that leave. An example of permeability within the marketplace domain is Gillette's strict control of the information flow prior to the release of a new product (Sella, 1998). Gillette uses secrecy to ensure a competitive advantage. Within the Enterprise Network domain, Permeability is manifested in the methods organizations use to screen prospective partners. Research has shown that organizations that collect information on critical elements of the partnership (i.e. compatibility of business interest, similarity of values/culture, compatibility of business processes, compatibility of reputations, resource complements) are more successful than those that focus only on the contractual relationships (Druckman et al, 1997). For the Organization Domain, development of the 1997 Corvette (Schefter, 1997) demonstrates how culture creates Permeability. Jim Perkins, General Manager of Chevrolet division at GM, created a stealth culture to continue work on a redesign of the Corvette at a time when GM management contemplated eliminating the line. Finally, within the Individual domain, Permeability is characterized by skill mobility. An organization's ability to retain critical skills and capabilities has a significant impact on its ability to grow Reichheld (1996).

Elasticity. Elasticity describes the methods and mechanisms that facilitate the actual shifting of boundaries. In the Marketplace domain this corresponds to the organization's specific value delivery approach. For example, Square-D corporation utilized internet technology to move themselves (and ultimately their industry) from one of *low-cost* standard circuit boxes to one of *rapid creation* of customized product by reducing cycle time on custom circuit boxes from 12 weeks to 1 week (Economist, 1998b). For the Network Enterprise domain, Elasticity represents the practices supporting the ongoing management of strategic partnerships (Druckman, 1997). Organization Elasticity represents the tools for process re-calabration (Hammer and Champy, 1993), while in the Individual Domain, Elasticity refers to a variety of human resource development capabilities.

Momentum. Momentum is created by centers of influence that support or hinder growth. Market identity is the Momentum of the Marketplace Domain. One of the best examples of this is the relationship

between Seymour Cray and Control Data Corporation (CDC) in the mid-1980s. CDC's market identity, mid-range computers, was not consistent with the developing idea of massive parallel processors (supercomputers) developed by Cray. Like the beginning of any movement, momentum begins as the first stakeholder generates excitement about an idea. Seymour Cray succeeded in creating this energy, but was forced to do so outside the boundaries of CDC, creating the identify of Cray Research and ultimately the industry of supercomputing. Momentum in the Enterprise Network domain is an organization's ability to leverage the combined resources of the alliance partners (Oliver, 1990). Creating the momentum of the investor community is the dynamic for the Organization Domain. Studies have shown that a loyal mass of investors is a significant factor in an organization's ability to secure resources for sustained growth (Reichheld, 1996). And in the Individual Domain, the ability to manage the change process and create alignment and commitment among the mass of employees, is a requirement of successful growth (Kotter,

The Growth Audit Model

Combining the Domains with the Growth Dynamics, you get a framework, or model, of the factors linking growth strategy with human resource requirements. Two additional variables contained in the Growth Audit model relate to the ability to define current and future boundaries (Landscape) and to address internal and external environmental conditions (Forces). These variables are derived from the scenario planning literature (e.g. Van der Heijden, 1996). While these factors are critical to measuring growth potential, they are not a focus of this research.

Figure 1
Growth Audit Model

	Marketplace	Enterprise Network	Organization	Individuals
Landscape				
Boundaries	Value Proposition	Extended Enterprise	Responsibility Centers	Role Fulfillment and Purpose
Horizon	Changing Customers	Potential Enterprise	Expected Value Structure	Redefining Loyalty
Forces				
Chaos	Market Changes	Communities of Interest	Cross-functional Collaboration	Emerging Roles
Competition	Market Leadership	Covenant Relationships	Resource Allocation	Options and Choices
Dynamics				
Permeability	Business Intelligence	Identifying Network Partners	Growth Culture	Skill Mobility
Elasticity	Value Delivery Approaches	Business Development	Business Process Recalibration	Growth Capabilities
Momentum	Market Identity	Creating Partnerships	Investor Relations	Growth Process
Stakeholder Interests	Customers	Partners and Suppliers	Investors	Employees

Research Purpose

While the development of the model represented an important addition to our understanding of the link between growth strategy and human capability, we believe that the effort is not complete unless that model is tested in some way. Therefore, we applied the model to research the human resource supports and barriers to implementing a growth strategy. The organization studied was a major pharmaceutical research center. This company had been experiencing phenomenal growth in revenue and profitability for a number of years. As a result, senior management set some very aggressive goals for the development of new products. In essence the organization wanted to double the number of drug candidates that were produced each year (typically 20 candidates result in one marketable product). As a result the research center was adding 50% to 100% more people, doubling the number of drug candidates, all while maintaining an industry leading success rate (as measured by scientists hours per candidate). The purpose of the Growth Audit for this organization was to clarify the critical issues associated with growth and to provide recommendations and direction for actions to effectively implement the growth strategy.

Research Methods

Sample

The sample for this study consisted of one Therapeutic Group (TG) within this pharmaceutical research center. The research center was organized into TGs associated with specific disease states. This TG was responsible for developing drug candidates for metabolic related conditions (cardiovascular, diabetes, obesity, osteoporosis, and atherosclerosis). The TG was headed by a Director and three Assistant Directors. Reporting to the Assistant Directors were 21 Lab Supervisors. Lab Supervisors are Ph.Ds. in biology that have ultimate responsibility for candidate production. Reporting to each Lab Supervisor is three to four Associates, Bachelors or Masters in biology or chemistry that assist the Lab Supervisors. In all there were 94 people in this TG. Of these 94, 86 actually participated in the study (91% participation). Participation was not 100% because of scheduling conflicts.

Procedures

The Growth Audit approach was a hybrid between an ethnographic scenario analysis procedure and a quantitative survey of values and assumptions. Similar to the "triangulation" approach advocated by Duncan (1989). Two principle methods of data collection were use in this study. First we conducted interviews with the Director and Assistant Directors. These interviews were then used to inform the design of a series of input group sessions, utilizing a group decision support tool (The Innovator® software) to allow us to combine qualitative and quantitative data. The process also employs an action research framework, where the research participants are active in analyzing and interpreting the results. The complete process is described below.

Step 1: Building the Specific Growth Audit Model. The Growth Audit model is somewhat generic. Therefore, consultants worked with a Steering Committee, consisting of 12 people representing all levels and groups within the TG, to customize the model. Most of the changes were cosmetic (e.g. changing "Marketplace" to "Growth Orientation") however, there were some, more substantive changes. For example, modifying the definition of competition to include competition with other TGs. These modifications occurred in a series of three focus group sessions. In general all of the elements of the model were seen as highly relevant to the TG. Adaptation of the Growth Audit model was seen as critical to achieving the TG's goals for the study.

Step 2: Conducting Executive Interview. The next step was to conduct interviews with the Director and Assistant Directors to obtain the executive perspective on each of the Growth Audit elements. The interview process started with a four hour overview of the Growth Audit model. This provided the executives with an opportunity to think about the issues before the interview. The next day one-on-one interviews were conducted. Each interview lasted about two hours. Two consultants were present during each interview and maintained independent records of the responses. These records were then compared and any discrepancies addressed.

Step 3: Synthesizing Interview Data into a Growth Narrative. Three consultants reviewed the interview records and identified principle content themes. The themes were consolidated and merged into a final list of content categories. Then the three consultants independently reviewed the interviews and categorized responses according to the content categories. While specific records of inter-rater reliability were not kept, there were very few discrepancies. Finally, these themes were synthesized into a Growth Narrative. This narrative was used within the input group sessions to communicate the intent of the growth strategy, the strategic choices facing the TG, and the human resources issues as perceived by the executive team. The Steering Committee reviewed the narrative to assure that it was relevant and meaningful to input group participants. A narrative script was developed to ensure consistent delivery of information across all input group sessions.

Step 4: Building the Input Group Session Template. The Growth Audit Model and the Growth Narrative were used to construct polling questions that were incorporated into an Innovator® software template. The Innovator software allowed participants to respond to a set of survey items, see the results of this survey immediately, and then discuss their opinions and concerns. The combined qualitative and quantitative analysis enabled us to enrich the findings and make cross group comparisons. The input group session template was first tested by the Steering Committee and revised prior to the actual employee sessions.

Step 5: Conducting Growth Audit Input Group Sessions. Nine input group sessions were conducted over a course of one month. Each session was introduced by the Director who set expectations. During the sessions, the Growth Narrative was read and the polling questions were voted on. The results of the polling were displayed on a projection screen and the consultants facilitated a discussion of the results. Discussions tended to focus on particularly salient or surprising results. Both consultants transcribed qualitative data from group discussions. Sessions concluded with an open-ended activity to solicit participant ideas regarding overall supports and barriers to growth. The group also ranked and discussed these ideas. In addition to the Growth Audit polling items, three demographic variables were also collected.

Analysis

The three consultants reviewed transcripts of the input group discussions, and principle themes were identified. Then two consultants independently reviewed each transcript a second time and categorized the responses by the content themes. The analyses of the consultants were compared and discrepancies resolved. While specific records of inter-rater reliability were not maintained, differences in content categorization were minimal. Input group survey items were examined using means and standard deviations.

Next, we examined the content themes to identify specific patterns that might reveal underlying causal factors illuminated by the model. This resulted in two outcomes. The first is a list of patterns predicted by the model and identified in the results, and second, it led to construction of a causal map of the growth supports and barriers. These will be discussed in the results section below.

Results

While a detailed discussion of the actual results is not possible here, we will illuminate specific findings that illustrate the utility of the Growth Audit Model. Specifically, we would like to discuss growth pattern recognition and causal maps that emerged from the findings.

Patterns Affecting Growth

Inherent in the Growth Audit Model is the hypothesis that opportunities for growth reside in examining the patterns across the four domains (Marketplace, Enterprise Network, Organization, and Individual). While each domain has its own unique dynamics, that doesn't mean that movement in one level does not influence the dynamics of another. Therefore, we looked for confirmation of these patterns in the results for the TG studied. We found three.

Cross Domain Conflicts. Expression of a specific growth strategy in one domain will send signals to other domains. These signals, if they are in conflict, should reveal potential barriers to implementation of the growth strategy. We found several examples of this. For example, analysis of the Marketplace Domain

revealed an increased need for greater business management skills on the part of Lab Supervisors. With the emergence of managed care organizations as principle customers it had become clear that drug development must acknowledge the implications of drug formularies. Unlike the past, new drugs that were just as good or even slightly better (fewer side-effects, more efficacious) would not make it on managed care formularies. Rather, the drug had to offer qualitative leaps in performance for a managed care organization to go to the expense of offering it. However, analysis at the Individual Domain revealed that the organization did not share this perspective on the need for business management skills. To the survey question "We have appropriate levels of business thinking skills" less than 20% disagreed. Discussion revealed that the majority of Lab Supervisors believed that this was the Directors responsibility and viewed the executive comments as efforts to "off-load" these activities onto the Lab Supervisors.

Dynamic specific levers. A third hypothesis generated by the model is that an organization's barriers to strategy implementation will cluster around specific Growth Dynamics across levels. This was partly supported in this research. We categorized the themes according to the Domain and the Dynamic and found that there was a critical barrier in all Domains relative to Permeability. This organization had a complete lack of competitive intelligence processes (Marketplace Permeability), has difficulty in creating an effective work relationships with strategic partnerships, principally bio-tech firms (Enterprise Network Permeability), expressed fear that their work culture was in jeopardy because of the rapid growth (Organization Permeability), and that growth was further devaluing the role of the Lab Associates who had limited opportunities for promotion or career development (Individual Permeability).

Momentum migration. Rapid growth is more easily obtained when there is a critical mass of stakeholders committed to the new strategy. While it is possible to create momentum, organizations can use the momentum from an existing critical mass to increase the speed of growth and change. Even when there is opportunity for growth, if the critical mass lags behind a corporate initiative, the initiative will inevitability stall because there is no momentum to change the current state. We found two critical examples of Momentum lagging behind the growth strategy. First, described earlier, was the unwillingness of the majority of Lab Supervisors to accept the need for taking a business perspective. Most Lab Supervisors were highly successful academic researchers who viewed "business issues" as beneath them. Lab Associates also represented a significant Momentum that could stall strategy implementation. Their satisfaction with the status quo was motivated mostly by the loss of a small, closely-knit, lab environment and concern over their career opportunities caused by the adoption of new technology that will reduce the interest value of the Lab Associate job.

Causal Maps

One of the intended outcomes of the Growth Audit Model is the ability to clarify the links between strategy and human capabilities. To this end, we examined the themes that emerged from the research to determine if they lead to any hypotheses concerning the causal relationship between strategy and human resource practices. We examined the data for statements of causality that linked two or more themes together. The result is the Causal Map below (see figure 2).

The map suggests that there is a link between the communication of strategy and the culture or behavioral practices seen within the organization. The links are moderated by the emotional impact (in the star box) created when the actions (the ovals) associated with the specific situation (boxes) are not meet. For example, with regard to Strategy, participants expected certain information to be communicated (priorities, the logic of the strategy, the vision, how alignment will be created). When these are not communicated, they create an emotional reaction (feelings of isolation, lack of clarity). These reactions impact employee's ability to support Implementation of the strategy.

Discussion

During the industrial age predictable linear growth was easily achieved. In the recent past growth was obtained through brute-force productivity improvements and cost reductions. As these begin to yield diminishing returns, organizations are abandoning the tools of the linear planning process. This new, non-linear planning process requires tools and methods that are substantially different from those used in the past.

This also means different approaches for human resource development. When strategic planning was more linear, human resource planning was easy but reactive. However, in an environment where planning is less linear and more iterative and systemic, HRD planning needs to play a central role in identifying supports and barriers to strategy implementation. HRD has long desired to play a more strategic role in organizational action. The Growth Audit case example illustrates one way to define HRD's role as a core element of strategy implementation.

This paper and research effort draws its inspiration from a set of real business issues facing an organization and it's human resource development capability. We believe that this is an important characteristic of model or theory development. There has been an tendency in our field to create increasing complex models of organizational behavior without concern for demonstrating the utility or predictive power of these models. While clearly this model needs further testing and validation, by using it to identify real world supports and barriers to growth we have demonstrated the potential value before presenting it as a model for other human resource development professionals to consider.

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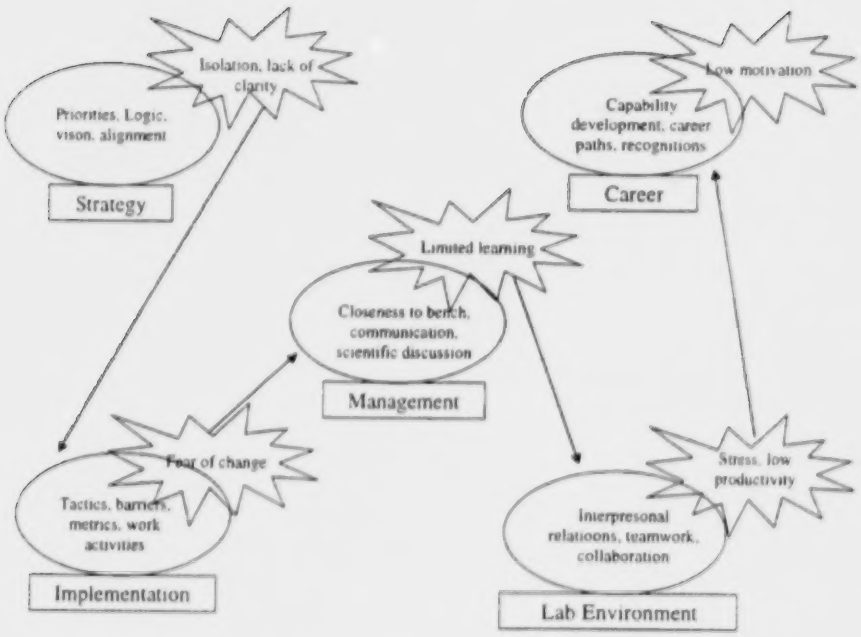
Figure 2: Growth audit causal map



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A Study of the Role of HRD in Response to External Environmental Change in Public Service Organizations.

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This study explores the role of HRD in response to external environmental change as a component of strategic human resource management-planning. The study population of public leisure service organizations represent an understudied yet common form of public service organization. Results show a high level of support for HRD activities highlighting the need for HRD researchers to concentrate efforts on developing frameworks that are of equal applicable in both large private and small public agencies.

Keywords: HRD Planning, Environmental Scanning, Public Agencies

Introduction

A recent awareness within both private and public organizations has been the recognition that human resources (HR) represent the most important asset of the organization (Nickell, 1995). Others stress that human resource management (HRM) determines the success or failure of an organization (Wright, McMahan & McWilliams, 1994). The role of human resource development (HRD) is now seen as a central component of competitiveness (Lengermann, 1996). As such, HRD practices must be aligned with the mission of the organization and changes occurring within the organization's external environment. The external environment is increasingly seen as an area warranting the attention of HRD managers (Greer, 1995).

There is wide spread agreement in both the popular and academic press that organizations now face increased pressure from their external environment (Lundy, 1994). Factors such as increased competition, new technologies, increasing levels of legal compliance, the beginning of the global marketplace, changes in social demographics and the workforce, a diversification of products and services as well as an increased responsibility to provide for the quality of life for employees greatly impact the environment in which organizations operate (Rothwell & Kazanas, 1994). Such change is likely to continue into the next century, with predictions that "the 21st century will be even more complex, fast paced, and turbulent" (Cascio, 1995, p. 928).

Problem Statement and Theoretical Framework

The need to plan for HRD and the need to envision a future state of an organization's HRD activities is commonly referred to in the literature (Rothwell & Kazanas, 1988). Few in the HRD profession question the importance of making HRD more future-oriented and giving HRD practitioners a role in formulating organization strategy (Torraco & Swanson, 1995). However, the development of a strategic approach to HRD appears a relatively recent development (Lee, 1997). Increasingly, short-term HR needs cannot be met by external labor markets, highlighting the role of HRD in the long-term demand of preparing people for assuming greater responsibility in achieving organizational strategies (Nadler & Wiggs, 1986).

There can be little doubt that strategic planning processes for HRM has increased in importance in both public and private organizations in recent years as evidenced by the wealth of literature (for example, Huselid, 1995; Wright & Snell, 1991). Environmental scanning, as a component of the strategic HRM model, helps identify, modify, and prioritize methods to pro-actively deal with the never-ending change in the world in which organizations operate. HRD plays an important role in the strategic HRM process.

Human capital theory has advocated the use of training to make employees more productive (Becker, 1975). Human capital theory states that the use of general training raises the skill, knowledge, and ability (KSA's) level of all employees in the industry whereas the use of specific training is seen as beneficial to a single employer (Lengermann, 1996). Therefore, HRD activities, as part of the strategic HRM process, have the potential to assist both an industry and individual organizations within the industry deal with external environmental change.

The vast majority of literature on environmental scanning for HRM and HRD has focused on large private organizations. Corporate America now recognizes the importance of aligning human resources with the changes

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occurring in the environmental external to the organization, yet little evidence is available to determine if public agencies engage in similar practices. In many small and medium-sized public organizations, HRD activities are not well developed. Similarly, little is known of the role of HRD in response to external environmental change in public agencies.

One form of public organization receiving very little HRD research is public parks, recreation and leisure service agencies. Public park, recreation, and leisure service departments provide a wide array of activities, programs, facilities, areas, and information. Local public leisure service organizations operate at the municipal, county, and special district level with each agency being organized and structured to meet specific community needs (Edginton, Jordan, DeGraaf, & Edginton, 1995). These organizations are seen as being an archetype of most small public agencies due to their small size and emphasis on administration of specific programs and activities requiring specialized training (Hamilton, 1995). For over 90 years, public agencies have been the most dominant delivery system for parks, leisure and recreation services (Sessoms, 1987). However, in recent years, public leisure service agencies have experienced massive transitions and increased pressures. This study seeks to incorporate the strategic human resource management model and human capital theory to investigate the contemporary external environmental challenges facing public leisure service organizations and the subsequent HRD response.

Research Questions

To examine the objectives of this applied research, the following questions were addressed:

1. Do directors of public leisure agencies believe that changes in the external environment will impact the HR employed?
2. Do directors anticipate that managerial action in the form of HRD activities will be required to reach organizational goals in the face of environmental changes?
3. Do managers plan common HRD activities in response to identified changes to aid in their planning of present and future HR needs?

Methodology

An instrument was developed based on existing literature for identifying trends in public park and recreation agencies (McKinney and Lowrey, 1987). Six external environment sectors were identified as being relevant to the management of public leisure agency operations. These sectors of the external environment were economic; demographic; political and legislative; technology; recreation programs; and parks, facilities, and natural resources. The resultant instrument was submitted to an expert panel of practitioners and academics to confirm face validity. These sectors were used to develop unstructured questions to elicit anticipated changes in the external environment and the possible impact of these changes on the HR employed. These questions followed a similar format to previous personnel planning instruments used to describe future trends and their possible effects on public and not-for-profit organizations.(Moore, 1986).

The sample consisted of executive directors (or equivalent title for the chief executive officer) of public park, recreation and leisure agencies in Illinois. This level was chosen because, ultimately all HRD activities must be approved by the executive director, requiring this individual to have both a present and future focus towards the HR employed. The sampling frame consisted of 289 public leisure agencies within the state of Illinois listed in the 1995-96 Illinois Association of Park Districts (IAPD) Membership Directory. From this list, a sample of 56 agencies was obtained using a stratified approach. The majority of public park and recreation agencies within the state are located in or near the city of Chicago. To avoid sample bias, the state of Illinois was divided into four areas based on IAPD Voting Zones with boundaries defined by county. A multi-staged sampling technique was used to select a representative number of agencies from each of the four areas with probabilities proportional to the number of agencies represented in each zone.

Data collection was conducted using an adaptation of the Salant & Dillman (1994) technique. By the closing date, a total of 46 usable surveys were returned for an 82% response rate. A combination of qualitative and quantitative data analysis techniques were used to evaluate the data. Qualitative data analysis focused on the identification of common themes using a reduction and interpretation approach as outlined by Marshall and Rossman (1989). Quantitative analysis used frequencies and descriptive statistics.

Results and Conclusions

All respondents identified a variety of external environmental changes anticipated to impact their agency over the next five to ten years. Wide spread agreement was found on issues related to the changes and challenges expected in the economic, demographic, political and legislative, and technology sectors of the external environment. Responses in the areas of recreation programs, and parks, facilities, and natural resources also show a high degree of agreement with seven common themes identified.

The emphasis of the study related to public leisure agencies' HRD responses to the identified changes. The provision of training was listed by 95% of respondents as the primary way to ensure that employee's posses the new knowledge, skills, and abilities (KSA's) needed in a dynamic changing external environment. The most frequently identified area for HRD activities was to increase computer skills (71%). The second most-reported response was the increased demand for employees to have specialist skills. Examples given by respondents included public relations, business management, and recreation programming (60%). Twenty six percent of respondents mentioned the need for HRD activities to develop employees with an increased level of communication skills. The need to provide language training so that staff can be bi-lingual to deal with an increasingly diverse client base was mentioned also 17% of the directors. The demand for HRD activities that encourage individual employees who have an interest in life-long or continuing education was mentioned by 12% of those responding. Training that gives employees the ability to form partnerships and work in a team environment was noted by only 10% of the directors. Other findings in this section of the survey included the desire for training and development programs that result in personnel with increased political skill and savvy.

Training has become a multi-billion dollar per year industry yet much confusion surrounds the range of appropriate activities to develop the desired KSA's of employees (Chachere & Martocchio, 1996). Training is widely acknowledged in the literature as the traditional approach to overcome shortcomings in the KSA's of employees (Rothwell & Kazanas, 1994). The range of HRD activities is enormous with Butler, Ferris, & Napier (1991) suggesting a classification framework based on time. This linear continuum of HRD commences with short-term training activities and carries onto long-term career planning (also known as employee education) which can be an ongoing process occurring through the employee's career (Rothwell & Kazanas, 1994).

The responses received in this study indicate that confusion surrounds the use and terminology of HRD activities within public park and recreation organizations. Among the 95% of agencies responding that additional training would be provided, many provided information as to the type of training intended for delivery. Many of these comments suggest activities that could be classified as employee development or career planning. In-house training programs were noted in 31% of the responses. This may suggest that a number of public leisure agencies perceive that their employees possess immediate gaps in the required KSA's for their current position. Career development programs were mentioned by 18% of directors indicating that they would be providing training. 24% of directors made reference to the provision of education opportunities for employee's which could be a reference to both short-term training and long-term employee development activities. This confusion of suitable HRD activities may result from the limited literature on the use of employee education in public agencies in general and in particular, within public leisure service organizations.

The choice to replace existing HR with the recruitment of new HR rather than invest in HRD activities was noted by more than 15% of those responding. Further probing to determine why agencies feel the need to replace existing staff would prove enlightening. Perhaps this raises problems in the recruitment, selection, and testing procedures of public leisure agencies. It may also be a reflection of past poor investments in training and development.

Implications for HRD Practice

This study investigates external influences on the planning and management of HRD activities in public leisure agencies within the state of Illinois. This study utilizes the external environmental scanning technique to identify likely changes, their possible impacts, and the HRD response to an understudied form of public organization. Small public organizations such as public leisure service agencies have been largely overlooked in the literature on determining HRD strategies. This study is of practical importance to leisure service managers to assist in future strategic HRD planning and development activities. The external environmental scanning process imbedded in the strategic HRD framework offers a potential model in which to gather information to guide HRD planning efforts.

This study has illustrated that public leisure service organizations are subject to many of the same external environmental pressures that other organizations face. The application of applied HRD to this sector of public service highlights the need to conduct research in a variety of organizational settings to further our knowledge of

training and development. This confirms the finding of an earlier related study in the public leisure service management field which suggested that, "there is always a need for staff training and development in park and recreation organizations" (McKinney & Lowrey, 1987 p. 1). As people demand more leisure services from their local park and recreation agency, the pressure on existing and future human resources to be suitably equipped with the required KSA's will increase. As the commitment and expenditure for training and development increases, it becomes vitally important to determine the most appropriate HRD activities for the employee, organization, and the publics they serve (Reyna & Sims, 1995). This study has highlighted the high level of support for HRD activities to prepare employees of public leisure organizations for future changes emanating from the external environment. It has also demonstrated a level of confusion surrounding the appropriate use of HRD activities within one type of public service organizations.

Further study is needed to understand the HRD function in small public agencies. Additional research on the uniqueness of small public organizations would be beneficial before HRD models developed in private organizations are universally applied. Sleezer and Sleezer (1997) have stated that the ultimate goal of HRD is to "support and improve individual, process, and organizational learning and performance" (p. 185). This applied research study has shown that HRD researchers should concentrate efforts on developing frameworks that are of equal assistance to the manager in a large private company as they are to the manger in a small public agencies.

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Operationalizing Alignment: Testing Alignment Theory

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This paper presents a theory-based operational definition of organizational alignment for the purposes of research. It includes an operationalization of the alignment construct and a description of an alignment measurement instrument.

Keywords: Alignment, Instrument

Many people who work with organizational performance for any length of time develop an intuitive understanding that the different components of an organization must be properly organized and balanced with each other for optimal performance (Rummler & Brache, 1990). This proper organization and balance between parts of the organizational system is called alignment.

Alignment is presumed to minimize conflict between the parts of the system, and to direct effort toward shared goals (Labovitz & Rosansky, 1997; Semler, 1997). Many people claim that alignment is important, even vital, for organizational success, but research has not produced any empirical data to support or refute these assertions. This limitation has manifested itself in the widely varying degrees of success that human resource development (HRD) practitioners have had increasing alignment in organizations for the purpose of improving performance (Bennett, Fadil, & Greenwood, 1994; Kerr, 1989; Kotter & Heskett, 1992; Labovitz & Rosansky, 1997). A better understanding of how alignment really works would aid both HRD research and practice by allowing us to separate fact from conjecture in our efforts to predict and improve performance.

Two of the prerequisites to empirical research are research constructs and measurement instruments that are based in the theory describing the phenomenon of interest. A search of many research and practical databases (ABI Inform, Alta Vista, CARL, ERIC, SocAbstracts, University of Minnesota LUMINA, all in 1998) produced few theory-based constructs of alignment, and no measurement instruments. This paper provides some further steps toward an operational definition, construct, and measurement instrument to make possible an empirical test of theory and practical assumptions about organizational alignment.

Theoretical Background

Different theories of strategic organizational alignment have been with us since the 1970's. Nadler and Tushman's (1989) insightful work on *congruence* conceived of the organization as an open system that was composed of interdependent inputs, process components, and outputs. The whole system functioned with greater or lesser effectiveness depending upon the degree of congruence, consistency, or fit between each pair of system components. Nadler and Tushman's congruence model of organization behavior was originally published in 1980 and adequately represents the core of nearly all later discussions of organizational alignment. Later research has offered additional information that expands the power of their theory and extends the concept of alignment into improved organizational change models.

Alignment is an essential component of most total quality management systems, as reflected by the Malcolm Baldrige National Quality Award (MBNQA) emphasis on alignment of business systems. Merron considers alignment to be a means to the goal of organizational quality performance, "Clarity and alignment among the five aspects of organizational life--purpose, objectives, strategy, structure, and culture--are key to the proper direction of the organization" (1994, p. 52). Labovitz and Rosansky add their own emphasis on the importance of alignment to these insights and quote Fred Smith of Federal Express as saying that "Alignment is the essence of management" (1997, p. 6).

As HRD research and practice have advanced, it has left behind earlier work on alignment. The McKinsey 7S Model and Galbraith's (1987) "Star Model" offered related models of organizational capability for competing in changing environments. These models presented the primary variables and noted the importance of alignment between them, but did not specify the relationships between variables. Instead, these models suggested merely that the variables were interdependent and that attending to and balancing the effects of each in the organizational design process would produce alignment, and thus performance. Alignment would ensure a greater degree of performance by increasing cooperation among different aspects of the organization's operating design.

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While models such as the 7S and Star Models could help organizations target areas for performance improvement, their assumption that strong alignment is desirable was not backed up with either theory or specific research. Some writers now question a basic premise of alignment—that increased alignment has a positive effect on performance—by suggesting that too much alignment might impair organizational flexibility and thereby decrease competitive performance (Kotter & Heskett, 1992). In this view, "over-alignment" could reduce openness to diversity of thinking and ideas and make the organization too rigid in response to changing conditions. There is no way of knowing whether this is correct until researchers can gather empirical data to test the proposition.

Semler (1997; 1998a; 1998b) has done the most recent theoretical work to attempt to define and describe alignment in terms that might would prove useful for research. At present, his is the only work available that defines the relationships between variables and specifies testable propositions of alignment theory. Semler's theory is based upon a synthesis and extension of the earlier work of others, such as Nadler and Tushman (1989), Rummler and Brache (1990), and Tichy (1983). It describes in detail several relationships between variables and theoretical propositions that could be tested through research (Figure 1).

According to Semler's theory, strategic alignment produces greater organizational performance through two mechanisms. First, alignment focuses the discretionary effort of organizational members on the goals of the organization. Second, alignment provides systems more conducive to pursuit of the selected strategic goals than to any other goals. Both of these intermediate outcomes influence essential determinants of performance. Discretionary effort strongly influences knowledge and motivation. Goals-conducive systems strongly influence individual and system capabilities.

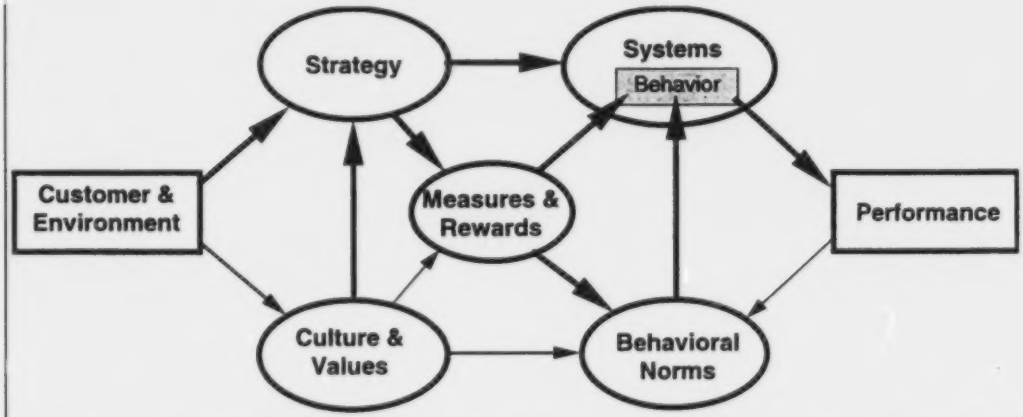

Figure 1. Strategic Alignment Model. The model shows the essential variables and their relationships. (Semler, 1998b, p. 6)

Semler also proposes that the effect of leadership is to increase the degree of agreement between variables in each of six dimensions of alignment. At any given point in time the states of agreement represented by the dimensions of alignment, taken as a whole, indicate the overall degree of strategic alignment of the organization. Increased agreement within a dimension of alignment increases the determinants of performance related to the dimension. Therefore, the greater the overall strategic alignment, the greater the performance determinants will be, and the greater the resultant organizational performance produced. The basis of Semler's theory is outlined below:

Theoretical Propositions of Alignment

1. There are sets of specific, observable behavioral indicators that describe alignment for each of the dimensions of alignment.
2. There are four determinants of organizational performance—knowledge, motivation, individual capability, and group or system capability.
3. The state of alignment in each dimension has a partial effect on the determinants of performance related to that dimension.

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4. The combined effect of the dimensions' effect on the performance determinants determines the portion of organizational performance that is within the control of the organization.
5. Leadership affects the state of agreement between variables in the alignment dimensions. (Semler, 1998b, p.3)

These propositions make it possible to build an operational definition of alignment and an instrument to measure alignment at a point in time, based upon the behavioral indicators.

Alignment Construct

The alignment construct is composed of variables and the relationships between them. The variables in Semler's alignment model are the things that must have proper organization and balance in relationship to each other for optimal performance. The direction of influence in the specific relationships determines the theoretical "flow" of alignment that can be of use to practitioners seeking to intervene in the organization.

Variables.

Alignment is the degree of agreement *between* variables in the alignment construct, but not the individual variables themselves. The eight major variables pertaining to organizational alignment are:

1. *Customer and Environment* (independent variable) describes the context within which the organization's strategy, values, behavior, and performance occurs. It provides opportunities and limitations that influence the organization's freedom of action and definition of successful performance. Customer and market demands greatly influence organizational strategy (Labovitz & Rosansky, 1997; Pearce & Robinson, 1994).
2. *Strategy* (independent variable) is the set of rational goal states intended to place the organization in an advantageous position and/or configuration within its environment. Successful strategy depends upon an accurate assessment of internal and external conditions. Strategy includes vision, plans, and communication (strategy deployment) at all levels of the organization (Pearce & Robinson, 1994; Wall & Wall, 1995).
3. *Culture and Values* (independent variable) refer to a set of implicit and explicit preferences and judgments concerning what is qualitatively good, bad, desirable, or undesirable. Values are a component of organizational culture and will be shared, in greater or lesser part, by the majority of members of a culture. The culture will transmit values to new members and will maintain a sense of continuity of values over time (Kotter & Heskett, 1992; Schein, 1990). There is no explicit or implicit reward or penalty for holding a certain set of values, only for displaying behavior derived from values.
4. *Norms* (independent variable) are implicit cultural guidelines that influence behavior. They form standards that facilitate interaction between members of a culture, and have a strong influence on the range and frequency of behaviors that members of the culture will display. Norms, like values, are a component of organizational culture. They will be shared by the majority of members of a culture and will be transmitted over time (Bennett et al., 1994; Schein, 1990). Norms are distinct from values in that they do not necessarily represent preferences and judgements, but are linked to formal and informal rewards and penalities for behavior.
5. *Measures and Rewards* (independent variable) comprise the set of policies, procedures, pay and benefits scales, incentive programs, promotion and disciplinary systems, and interpersonal interactions that provide tangible or intangible incentives and disincentives to individual members, groups, and teams within the organization. Rationally designed reward systems are a formal part of the organizational structure that encourages or inhibits specific behaviors (Bechet & Walker, 1993; Britton & Ellis, 1994; Kerr, 1989).
6. *Systems* (independent variable) are the structural elements within the organization that move or transform resources (information, matter, and energy) to produce desired outputs. The systems variable includes core work processes, information systems and learning processes, financial and administrative control methods, and the structure of the organization. Systems are designed rationally to meet particular goals (Jacobs, 1989), but often stray from perfect rationality in operation. Many sub-systems will comprise a typical essential organizational process, and the most basic unit of analysis is the individual job. From the smallest filing process to the organizational system as a whole, systems form the rational structure of the organization (Juran, 1992; Rummler & Brache, 1995).
7. *Behavior* (mediator variable) is the observable activity of individual and group actors within the organizational system. Any given behavior is directed toward one or more goals of the actor, which may or

may not contribute or be intended to contribute to achievement of the strategic goals (Campbell, McCloy, Oppler, and Sager, 1993).

8. *Performance* (dependent variable) is the collective output of individual and group behavior in the organization as moderated by the capability of organizational systems. Conceptually, organizational or system performance can be represented by the formula (*affect x behavior x cognition x system capability*) directed toward a specific result (Campbell et al., 1993). These determinants of performance manifest in a weighted set of organizational performance indicators. The specific indicators are determined by each organization and define performance that organization alone. Each indicator falls within one of seven categories suggested by Sink, Tuttle, and DeVries.

> Performance of an organizational system (i.e., a work group, cost or profit center, division, function, plant, firm, etc.) is comprised of at least seven criteria. These are: effectiveness, efficiency, quality, productivity, quality of work life, innovation, and profitability/ budgetability (Sink, Tuttle, & DeVries, 1984, p. 267).

Sink, Tuttle, and DeVries' definition of performance allows the flexibility for each organization to determine what specific outcomes are important to its unique goals, environment, and "personality." This offers an interpretive measure that is not generalizable with standard statistical algorithms, but that provides richness for practitioners. The concept mirrors the "Balanced Scorecard" approach, however, and can provide a good basis for a more objective set of performance indicators.

Relationships.

Alignment does not refer to any one variable alone, but instead to the relationship between pairs of variables. The degree of agreement or congruence between variables defines alignment. The variables alone do not have meaning in terms of alignment. The following table shows the variable pairs that relate to alignment.

The leading variable...		... directs the receiving variable
Customer & Environment	⇒	Strategy (goals)
Organizational Values	⇒	Strategy (goals)
Strategy	⇒	Rewards
Strategy	⇒	Systems/Structure (overall purpose)
Strategy (goals)	⇒	Strategy (deployment)
Systems (overall purpose)	⇒	Systems (components)

Alignment theory refers to each variable pair as a dimension of alignment (Semler, 1998a). For each dimension, the *leading variable* is the one that ideally determines the state of the other, labeled the *receiving variable*. Although both variables are theoretically interdependent (Galbraith, 1987; Semler, 1997), the system characteristics of the leading variable give it more influence over the receiving variable (Boulding, 1956). Each of the receiving variables can be hierarchically nested within the scope of its leading variable.

This plays itself out in the ease with which one variable can affect the other. For example, it is easier to select a strategy that will meet the constraints of the customer and market environment than it is to change the environment itself. This is because the environment has higher system characteristics into which the organization's strategy is nested. Thus, the customer and market environment is the leading variable and the strategy is the receiving variable.

The interactions between leading and receiving variables manifest as specific organizational behaviors that people within the organization can observe. For example, within the *customer & environment ⇒ strategy (goals)* dimension, one specific, observable interaction might be the degree to which the strategy (receiving variable) reflects information about the customers (leading variable). An interaction in which the receiving variable is determined by the leading variable is labelled a *correct interaction*.

Operational definition of alignment.

The operational definition of the alignment construct is the frequency of correct interactions in which the leading variable determines the state of the receiving variable. For the purposes of research, this could be measured by the frequency of correct interactions in each dimension of alignment that subjects report on an instrument that describes the behavioral indicators of alignment.

Measuring Alignment

This operational definition of alignment allows us to create an instrument to measure alignment. The instrument presented here in abridged form measures the degree of alignment between the variables in each alignment dimension using a 48-item questionnaire (Appendix 1). The degree of alignment for each measurement dimension is expressed as incidence of observed organizational behavior on a 1-5 scale. A researcher could add additional dependent variable measures of performance to the questionnaire, or might collect objective data from other sources.

Each questionnaire item reflects a behavioral indicator predicted by the alignment theory. The scale is constructed to match high ratings with indicators that the theory predicts would be present in a strongly aligned organization. Each set of items provides a picture of the state of its corresponding alignment dimension at a point in time within the organization, as defined by the perception of the respondents.

The author began the validation and reliability assessment process for the alignment instrument in mid-1998. This was not complete at the time of publication. Validation is to be determined by expert panel review for face and construct validity. A single-organization assessment of test-retest reliability will follow the expert panel review process. The limitations of a self-report, volunteer, perception-based instrument are obvious, and acknowledged. This author proposes that the benefit of having a theory-based instrument that measures perceptions of alignment is, for the present, better than the alternative of having no instrument at all.

Analyzing Alignment Data

The research instrument presented here can provide several types of data.

1. A mean score for each questionnaire item from among the respondents for the subject organization,
2. A mean composite score for the alignment dimension, as above, and
3. A mean composite score for the overall alignment of the organization.
4.

With a research sample of satisfactory size and a set of dependent variable measures, these data make it possible to determine the correlation between the items, dimensions, and overall alignment and the organizational performance results. A researcher could analyze the results with linear regression, discriminant factor analysis, or other related statistical technique.

The statistical analysis could determine the partial contributions of each dimension of alignment to the measures of organizational performance. This type of data set would also permit the researcher to calculate item intercorrelations between organizations. Intercorrelations would conceivably demonstrate the degree to which alignment dimensions make the same relative contribution to performance in different organizations.

Summary

Organizational alignment represents the systematic agreement between the different major elements of organizational life. Alignment theories do not presuppose that alignment is the only important predictor of organizational performance, or that overall organizational success can be explained by alignment alone. They do suggest that an organization that aligns its strategy with its values and customer imperatives and that then aligns all of its systems and activities to support its strategy will be most effective.

Until we can measure and examine alignment, however, this is all just conjecture. We do not really know what effect alignment has on performance, or what interventions might improve alignment. HRD professionals have the responsibility to improve performance and enhance learning at the organizational level. If alignment represents the collective power of people focused on the "Main Thing" for their organization, HRD should be able to identify and facilitate that power. We may be able to affect alignment and it may be sound route to learning and performance, but we will not know for certain until empirical research offers some results.

The first step toward more effective intervention strategies is reflective practice and research. In order for research to increase our understanding of organizational life, the researchers must have tools with which to measure the obejcts of interest. Only when something can be accurately measured can we make sound comparisons from specifics to general cases. Only when we can explore reasonable generalizations can we predict well enough to make informed decisions to guide practice. In the end, effective practice will benefit from an increased understanding of alignment.

This operational definition of alignment and the measurement instrument offer some first steps toward empirical data. By specifying how alignment affects the determinants of performance, the alignment construct makes the link between alignment and performance easier to test. The leading and receiving relationship in each alignment dimension should provide guidance to researchers and practitioners. In addition, the behavioral indicators for the alignment definitions should provide some clear examples of how one might observe the state of alignment within the organizational context. When considered and tested within a theory-based study, researchers can use these tools to increase our understanding of alignment.

The benefit of an increased understanding of how alignment works is that practitioners can more easily and confidently design and implement interventions that take alignment into account. Theoretically, by improving alignment they can have a greater degree of confidence that actual performance improvement will result. There is a possibility, however, that alignment is not worth bothering about. Until we can get accurate data and test our assumptions, we will not be able to know.

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Appendix 1. Alignment Measurement Instrument (abridged)

Assessment Rating Scale

The numbered statements below describe things that you may have observed in your organization. Rate each statement according to how much it describes your organization, using the following 1-5 scale.

5 = to a very great extent
4 = to a great extent
3 = to some extent
2 = to a little extent
1 = not at all
NA = I don't know or have not observed this

Customer & Environment ⇒ Strategy Alignment

Dimension Definition: Characteristics, processes, and practices that make the organization's strategy most likely to succeed within its market by meeting or exceeding the expectations of its customers.

1. Our strategy is based upon valid and reliable information about our customers and market environment.
2. Our strategy takes recent industry trends and developments into account.
3. Our strategy is based upon the needs and wants of our current and future customers.
4. Our strategy clearly shows how we will meet or exceed our customers' expectations.
5. We plan to use our existing strengths to move toward strategic goals.
6. Our strategy is designed to build our capability for the future.
7. Our strategy includes plans to develop or acquire the organizational capabilities we will need to keep up with or lead the market.
8. Our strategy includes features that will help us to respond rapidly to changing competitive conditions and customer demands.

Organizational Values ⇒ Strategy Alignment

Dimension Definition: Characteristics, processes, and practices that make the organization's strategy most likely to be accepted by its members by incorporating their values, hopes, beliefs, and aspirations.

9. Our strategy offers employees at all levels something more to strive for than a paycheck.
10. Our strategy balances the requirements of our customers and market environment with the existing values of the organization.
11. Our strategy honors and reflects the values of everyone in the organization.
12. Our values support the kind of things that our strategy requires for success.
13. Our strategic goals are based upon the core values and shared purpose of the organization.
14. Our strategy inspires commitment by appealing to employees' values.
15. Our strategy inspires action by appealing to employees' values.
16. Our leadership considered our organizational culture and values as they developed the strategy.

Strategy ⇒ Rewards Alignment

Dimension Definition: Characteristics, processes, and practices that provide formal and informal incentives to behave in ways that support achievement of the organizational strategy. These include performance management systems, promotion and compensation systems, and how much attention managers and executives pay to information and people.

17. Our promotion system rewards those who help the organization achieve its strategic goals.
18. Our compensation system rewards those who help the organization achieve its strategic goals.
19. The way we assign work or projects rewards those who help the organization achieve its strategic goals.
20. Each person has important incentives to work toward our organization's strategic goals.
21. Our reward and incentive structure supports the things we need to do to achieve our strategic goals.
22. Work or projects that contribute the most to the strategic goals get the most attention.

23. Our system of reports, progress reviews, and inspections focuses the most on the things that are most important to our strategic goals.
24. Our performance review results are linked to how well we support the strategic goals.

Strategy ⇒ Systems/Structure Alignment

Dimension Definition: Characteristics, processes, and practices that make all elements of the organization work in cooperation to achieve strategic goals and objectives. This includes organizational structure, work and decision processes, information flows, and development of capabilities.

25. Our processes, procedures, and systems were designed to help us achieve our strategic goals.
26. Our different departments, groups, and teams are organized in a way that makes sense for our strategy.
27. We routinely identify and remove barriers to achievement of strategic goals.
28. Our teams and departments work toward common goals, and not at cross-purposes.
29. Our processes and systems keep us focused on our strategic goals.
30. Our human resource, finance, and equipment acquisition activities are focused on efforts that will help us achieve our strategy.
31. Our information collection and distribution systems help us make decisions that support our strategic goals.
32. Our budgets reflect our strategic priorities.

Within Strategy Alignment (goals ⇒ deployment)

Dimension Definition: Characteristics, processes, and practices that make sure that the strategy is known, accepted, and supported by subgoals that contribute to achievement of the strategic goals at every level of the organization.

33. Department and team goals contribute directly to our strategic goals.
34. People seem to understand the direction and goals of the organization.
35. People get feedback about the organization's progress toward strategic goals.
36. Leaders frequently communicate with employees about where the organization is headed and how they can help achieve the goals.
37. Each team or department has action-oriented goals that support the overall strategy.
38. People understand how their work will help the organization achieve its strategic goals.
39. Leaders spend most of their time working on tasks that are important to the strategy.
40. People understand the strategy well enough that they can work toward its intent even when there is no clear direction.

Within Systems Alignment (overall purpose ⇒ components)

Dimension Definition: Characteristics, processes, and practices that make sure that key systems, processes, and activities are supported by component systems, processes, and activities that contribute to achievement of the strategic goals at every level of the organization.

41. The day to day details of our jobs and processes work together efficiently to support our strategy.
42. When we spend money on people, equipment, or process improvement, we make sure that the activity supports our strategic goals.
43. We can do our work without conflicts between work processes, systems, or departments.
44. Each process or system we have has a clear purpose.
45. Each system or process does what it is supposed to do efficiently.
46. Our jobs are designed so that everyone can help the organization achieve its strategic goals by doing his or her regular job.
47. Our systems and processes are flexible enough to respond to change.
48. Teams and departments in the organization work together without competition.

Scaling the Walls of Academic Silos: The Birth of a Cross-disciplinary Academic HRD Program

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This paper describes and analyzes how one HRD program transcended the walls of the academic silos of a graduate school of business and a college of education and rewrote itself anew in a postmodern world. The purpose of the study was to identify what contributed to and what worked against the establishment of the joint program and to build theory about the postmodern skill of collaborating across boundaries.

Keywords: HRD Programs, Postmodernit

Academic HRD is a field that has never been solidly situated in the modern world. If modernity means clearly bounded, rationally and hierarchically ordered, and based on unitary scientific "truths," then HRD was definitely a field ahead of its time. It spanned disciplinary and professional education boundaries in universities, sought to establish an equal partnership between theory and practice, and was sabotaged in any efforts at enshrining truths by its own diversity of interests and membership.

Although probably unaware of its emerging identity at the time, the "edginess" of HRD reflected its uncomfortable position as a postmodern field. Faculty and students who have struggled to find and maintain a place for their HRD programs in universities characterized by entrenched and heavily bounded academic and resource silos might go so far as to say that postmodern position exceeded uncomfortable and gravitated toward pain. Milan Kundera captures the pain of living on the boundaries in the title of his book The Unbearable Lightness of Being (1984).

According to William Berquist (1993), the pressing themes of postmodernism are constructivism, language as reality, globalism, and segmentalism. He goes on to write that it is "virtually impossible to make a definitive statement about our contemporary world because this world is filled with contradictions and discrepancies...a fragmented and inconsistent postmodern world (p. 32). For academic HRD, these themes are present in its constantly changing definition of itself, its vulnerability (shared often with management) to the "fad of the day," the necessity to address the issues organizations whose allegiance transcends national boundaries, the challenges of a multinational labor force, and the difficulty of wrapping the field up in one neat and unchanging package.

This paper tells the story of the transformation, explains the research methodology, identifies major themes, notes some of the inhibitors to the collaboration, reviews existing literature on institutional collaboration, and suggests a theoretical perspective.

The Story

In the mid-1990's, one of the largest and best known academic HRD programs in the country nearly disappeared. It had lost one of its three faculty, a very visible and well-known scholar in the field. One of the other faculty was under extreme personal stress and the other was as yet, untenured. Most of its resources had been taken over by the department and college and as part of the take over of a designated scholarship fund, its doctoral program had been "put on hold."

In the midst of this demise, a group of adult doctoral students from the program arranged a meeting with the university's president and argued on the program's behalf, explaining what a difference it had made in their lives and in their work in organizations. The university's president and the provost at the time told the graduate dean and vice president for graduate studies that they could see no reason to abolish the program and that they would turn it over to her to handle in whatever way she wished. She chose to save the program by placing it under executive education in the Graduate School of Business and making it a collaborative program between the Graduate School of Business (GSB) and the College of Education (CE).

The relevant deans met and agreed on the financial arrangements. The GSB would capitalize the program and after they had been repaid, the two colleges would split the profits on the basis of the number of courses they

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provided for the program. The program would be at the masters level as were other academic programs under executive education. The relevant department chairs and faculty from each college were called together for a meeting chaired by the dean of executive education. The chairs had already agreed to the arrangement in principle and the next step was for faculty from both colleges to agree to develop the program. After a few weeks, an associate professor from GSB and an associate professor from CE agreed to develop the program. The Dean of Executive Education appointed them as co-directors for the program.

These meetings took place in the early Fall of 1995. Faculty then initiated a day long retreat to address the unease that had been expressed by both partners regarding the values and culture of the other. Out of that meeting came a consensus that the program would be run on a cohort basis, intra-cohort competition would be discouraged, grading standards would be high, the program would be transformative, and the program would require students to do assignments in their workplace based on what they were learning in class. Later meetings mapped out a content curriculum that included human resource development, human resource management, and business. Conceptually, the curriculum focused the first year on HRD as a strategic partner and the second on the role of HRD in globalization. In terms of skills, students learned interpersonal, change, HR, and business skills. Structurally, the program consisted of an initial week-long executive seminar during August focused on strategy, two semesters, a week-long seminar during the next August focused on globalization, two semesters, and a final action learning experience in Australia (Brooks, 1998).

Marketing began in earnest during the spring of 1996. Brochures and flyers were printed and relevant business, government and professional organizations were contacted. Students from the previous program played an instrumental role in marketing the new program by sharing with prospective students how the original program had changed their lives. By summer, students were still being recruited for the program with the last student accepted into the program only the day before the executive seminar was to begin.

Initially, students in the program received their degree in the College of Education. However, after the program was approved by the legislature and the Graduate Assembly had granted tentative approval for it to go ahead, the Graduate School of Business pushed the Higher Education Coordinating Board to grant the program its own degree. The program was christened the Masters in Human Resources Development Leadership Program (MHRDL), and assigned the prerogative to have its own graduate advisor and graduate studies committee. The GSB oversees all marketing and financial matters. Permanent staff and faculty for the program include a full-time administrative assistant, a program facilitator, and two co-directors. In the spring of 1999, the program will present its accomplishments before the Graduate Assembly of the university for final approval as a permanent graduate level program.

The program graduated one cohort in May 1998 and has two cohorts in-progress. Initial class sizes have ranged from 21 to 30 students. Students must have five years work experience to qualify for the program. They must currently be working in the field of (or be anticipating a shift to) HRD.

Methodology

This research addressed the question of how a particular HRD program was established as a collaborative project between a graduate school of business and a college of education. The purposes of the research were to identify the factors that contributed to and worked against the program's development and to contribute to theory on institutional collaborations.

The assumptions on which this study is based are those hermeneutics. In other words, the data represents different perspectives and has gone through several intersubjective interpretations prior to appearing on this page. Through the process of interviewing and conversation, the stories told by those involved have developed and changed. Thus, the paper is a hermeneutic reconstruction of the interplay of all of those stories, both written and unwritten, in the creative minds of the authors.

Data collected included formal interviews, informal conversation and interviews, observation, and documents. The administrative faculty member conducted formal interviews with the Vice President and Dean of Graduate Studies, the Dean of Executive Education, the two co-directors, the Program Facilitator and seventeen graduates of the program.

One of the co-directors and the program facilitator analyzed the data through a process by which the co-director interviewed the facilitator regarding the following questions: (1) what surprised her the most? (2) what was the thematic story told by each of the interviewees? (3) what factors seemed to inhibit the development of the program? (4) what factors seemed to work on the program's behalf? (5) what motivated each of the major players in initiating and developing the program?

One of the three research collaborators wrote the paper. The others contributed through critical and creative reading. Thus, the actual written product is a joint construction of all three collaborators.

Validity is conceptualized in hermeneutic terms as the situated negotiation of meaning by all who participated in the research project, whether as the research population or as the researchers.

Thematic Analysis

This collaborative program was born of a confluence of events and people that enabled a quick and successful startup. Only one year passed from the time the Vice President and Dean of Graduate Studies initiated the discussions with the two deans of the colleges and the beginning of the first cohort's first executive seminar. The particular milieu that made this development possible included a favorable political and social context, the ability to capitalize on diversity, key players with strong personal motivations, and the cultivation and maintenance of interpersonal relationships and communication.

Political and Social Context

The development of the program took place within a national controversy over the appropriate role of higher education. The "ivory tower" was under assault by those who believed universities had become too isolated and out of touch with their communities' needs. Student demographics were changing from predominantly 18 to 21 year olds to older returning students. The national agenda had begun to focus on preparing people for the workforce and communities eager to attract industry were addressing the need to provide educated workers. Distance education was beginning to put a more competitive edge on education, throwing educators into the same competitive fray as other enterprises affected by global rather than just local competition. Information became more readily available to "everyman" through the Internet.

Within this context, universities seriously began to consider what role they would play in this changed world. The monopoly on information no longer conveyed a privileged status. The perceived privileged life of tenured professors was beginning to grate on state legislators who answered to a constituency of workers being asked to put in longer and more intense work hours with little increase in reward. Finally, many state universities were experiencing cuts in funding that increasingly was shifting the burden of financing higher education to the universities themselves.

All of these factors combined to set the right conditions for a program such as the MHRDL Program to be initiated. The Vice President and Dean of Graduate Studies comments on the particulars:

> We needed to not be just a 9-5 campus. Berdahl was expanding Continuing Education opportunities to the community. We were looking at ways to serve more students without burning out faculty...I frequently introduce myself now as the dean of the largest public graduate school and the dean of the smallest private graduate school.

The Dean of Executive Education was in agreement:

> The university needed to be able to demonstrate that it could reach across borders and also reach into the community. Hands across the water if you will...We were considered somewhat inaccessible to the community.

The Vice President and Dean of Graduate Studies was also looking for ways to expand the vision and involvement of the two colleges in areas they traditionally had excluded from their activities:

> Business needs to be more involved in public enterprise. Education needs to be more involved in private education. We need to be part of the national debate on these issues.

The program was birthed in a time of change. The opportunity was available and the time was right to build something new. A program that addressed community needs, crossed internal university boundaries, produced revenue, and existed outside of the constricts of traditional education was an ideal innovation for the time.

Capitalizing on Diversity

While the cultural differences of the two colleges at first seemed to be most salient, they were not the challenge the key players had expected. A number of other differences were equally or more important and needed to be negotiated throughout the process.

"Many layers of collaboration"

Much of the literature on collaboration address the issue of the merging of cultures. In fact, organizational culture has become an important construct in organizational theory. However, one of the surprises about the collaboration was that the expected cultural tension did not seem to be as troublesome as anticipated.

> While some members of both groups did indeed hold the conventional stereotypes of business as "hard" and interested primarily in money and education as "soft" and no academically rigorous, those perceptions did not seem to impede the progress of the program in any significant way. *Program Facilitator*

> It wasn't really harder to do intercollege collaboration because that issue was surfaced early on as this huge thing which I think actually turned out, while, an issue, turned out to be of lesser import than was initially identified. *GSB Co-director*

> There are many layers of collaboration in here and only one was made explicitly, which is two colleges with two different cultures. Which actually in some ways was the easiest and most visible and the most well understood at a coarse and cursory level. *GSB Co-director*

> One of the things it was clear was going on in the [first] meeting was all faculty were looking at each other and trying to decide, "Can I work with this person?" Because to form a collaboration of this nature, which is complex and difficult to get up and running from ground zero, you have to be sure that, first of all, the other person's going to carry their fair share of the burden. And second of all, that you have something of the same vision so you're not working at cross purposes with each other. *CE Co-director*

> One of the most fascinating factors that struck me was that the initial players were frequently more worried about working with the others within their own college than they were working with the people across colleges. The political, personal, and professional relationships seemed much more important on an "intra" level than they were at an "inter" level. *Program Facilitator*

However, because of initial anticipation of cultural problems, the faculty initiated a retreat for the faculty and administrative players from the two colleges. How important this retreat was for getting the collaboration off on the right foot is unclear.

> We scheduled a meeting with an outside facilitator and facilitated what we might call a visioning exercise, but really had more to do with almost a merger in a sense. Because that's really what we were doing was merging. We set it up basically so that what we were doing was trying to look at what strengths did we think each of us brought and how could we make sure that what we did would not lose the strengths from either the GSB or the College of Ed. The idea was to build on strengths rather than focus on disagreements. *CE Co-director*

> What I recall from that meeting was to me it was critical and not critical. Here's how I can say both of those things at the same time. It was critical in that there was an establishing of some sort of shared destiny. Some sort of subtle feeling was created although there was no agreement on anything substantive. Which is why I say it was critical yet non-critical. *GSB Co-director*

"Collaboration as a Bouquet of Flowers."

Perceptions of the collaborative experience. Key players each viewed the collaboration in a different light. The vice president and dean of graduate studies held the vision for the collaboration when she said, "I think of collaboration as a bouquet of flowers. You want different flowers in the bouquet."

However the differences could be trying at times. In the words of one of the co-directors,

> It's like having kids. It really is a very good analogy. In retrospect, I'm very glad I did it. But I didn't have any idea of the full magnitude of what that would involve...You don't think about the fact that you're only getting three hours of sleep a night. You just do it. You mjust kind of go through it. So once those processes were set in motion, each of them had their own momentum. *GSB Co-director*

Nevertheless, all of the key players voiced admiration for what the other college and their faculty contributed and a belief that the program was far better as a result of the contributions from both sides.

> Actually, I have been stunned by the quality of what has evolved. It far exceeded either my vision or my expectation of what could come out of this collaboration. I knew the idea was good. I knew our partners were good. I just didn't know how well what we produced would exceed what either of us could do on our own. *CE Co-director*

> I think we have been able to bring together in the curriculum and in the pedagogy the best of both worlds. I think that really is a strength. We're able to deliver a broader range, teach a broader range of issues with a broader range of pedagogies than we could ever do with either side delivering on their own. I think we have a broader and better vision together. *GSB Co-director*

Strikingly, the two directors were very different in their strengths. Although this resulted in occasional tensions and misunderstandings on a day-to-day basis, the directors clearly respected the other's gifts.

> I don't know what would have happened without Alison's administrative skill. She made the program credible on an administrative level within the university and with students, and in a large bureaucracy such as a state university, these things are critical. She set up systems and made sure everything was done when it needed to be done. *CE Co-director*

> I trusted Annie's vision of the program. From the very first day, it was clear to me that at a big, overarching level, she had thought about this, she was able to articulate it. She knew where the thing needed to go at a big picture level. We weren't going to get anywhere without that. That was what we were going to sell. And that's what we were going to deliver once we sold it. Her vision was key. *GSB co-director*

The stylistic differences between the two directors and the disciplinary perspectives they represented were very evident to the students. None were surprised to see that on the Myers-Briggs Inventory all participants took at the beginning of the program that one preferred an extroverted/intuitive/feeling/perception style while the other preferred the opposite introverted/sensing/thinking/judgment style. However the result for everyone was that the challenges and benefits of difference were at once visible and open to discussion. One student described the dynamic in the following way:

> Annie and Alison couldn't be more different if they tried. Having one of them in the morning and the other in the afternoon is sometimes very disorienting. But on the other hand you can see how each of their strengths have been woven into the program. I for one certainly learn very different things from each one. *Student in first cohort*

Nevertheless, building a commonality between members of two different colleges geographically separated on campus did not come effortlessly. It took work. The dean of Executive Education was in a particularly good position to see some of the struggles with working across institutional cultures.

> We have to have enough of a common culture to tolerate each other's differences and to realize we're not going to see things eye to eye...We have to create our own mini-culture...to fill in the white space between the College of Education and the Graduate School of Business. It can be done if it's designed with respect and integrity... It takes conscious work. We have to let go of a lot. But the work is worth doing. *Dean of Executive Education*

Unexpected Cultural Differences

In addition to the intercollege differences and the individual stylistic differences that distinguished the two directors, demographic differences in age, gender, rank, and point of view at times caused misunderstandings. Similarly, differences emerged between people in the same department who had not necessarily worked together before and so were unfamiliar with and did not necessarily trust each other; groups that appeared homogeneous because they were in the same department were at times composed of strangers with little in common. Within colleges, interdepartmental but intracollege differences emerged. This kind of diversity is exemplified by the large amount of time the GSB co-director spent working with the Accounting Department and faculty in developing a course that was suitable for non-business and accounting majors. Additionally, faculty and administrators worked from differing role perspectives, and this at times created tension.

Strong Personal Motivation

Although this research focuses on five key players in launching the program, interviews revealed that those who contributed far exceeded that number. Most of those contributors have receded into the history of the program. However, the interviews revealed that motivations were diverse. For example, the Dean of Executive Education saw the joint program as an opportunity to "capture" surplus consumer dollars:

> The legislature votes a degree of subsidy from tax dollars...Populism is very high in this state. That means when you subsidize, you subsidize tuition, etc. We're leaving considerable money on the table in that many families could afford to pay more. It's a consumer surplus...When MHRDL came along, I saw it as an opportunity to capture some of the surplus.

The Vice President and Dean of Graduate Studies was more interested in developing ways in which the university could extend its expertise to serve the community:

> It's important to help corporations with their training and development. If we do not do it, they will do it themselves with less quality. Hamburger University, if you will...We have the strengths here. Intellectually, it is important that kind of learning has a research base...There is a need for renewal of people in organizations. Our HRD students should lead that.

The two co-directors spoke more of the opportunity to offer a better quality of direct service.

> I was teaching general courses in the MBA core. This was a chance to change my teaching assignments to my specialty. It was a change to teach something I would like to teach with an audience I thought I would have a very good rapport with. *GSB Co-director*

> To be perfectly honest, I was very tempted NOT to sign on to build this program. I was tired from having just been tenured and beaten by the struggle to stop the demise of the original program. But I guess I saw a lot of support from current and past students and heard them talk about what their experience in that program had meant to them. That was hard to ignore. I also knew that the program would be enormously enhanced by being able to integrate human resource management and business skills. The field of HRD was changing and this looked like an opportunity to change the program to address those changes. *CE Co-director*

Interpersonal Relationships and Communication

The founders of the program recognized from the beginning that communication and trust were going to be crucial to the success of this collaborative program. The first hiring decision the co-directors made was to employ a program facilitator who could span the boundaries of the collaboration and who could serve as an interpersonal

interface among faculty, staff, and students. The Dean of Executive Education referred to the need to fill in the "white space" between all of the players. The co-directors also had a sense that this role would be important, particularly in the absence of any formal organizational structure of authority.

> I knew from my own organizational experiences that interpersonal relations were not going to be easy in this situation. But I'm still always surprised at the extent to which those sorts of things can make or break a program. The fact that we hired someone who could play sort of an organizational development role between the two colleges and the two co-directors and facilitate a climate of open communication rather than letting minunderstanding go was absolutely essential. *CE Co-director*

> The Program Facilitator's role was pivotal to the program. A lot of gaps between dyads or in groups needed to be bridged that couldn't by the people involved at the moment it was needed...Kathy was able to do that. She was able to step in and fill the holes. *GSB Co-director*

> I think of my facilitative role as that of a border crosser. I try to understand what everone involved is thinking and feeling and to make sure we create space along the way to notice and negotiate any bumps on the road. *Program Facilitator*

Because no legitimate authority cuts cleanly across all of the boundaries in the collaboration, expertise and knowledge were difficult to identify and agree upon. Without traditional methods of resolving these differences, interpersonal trust became critical. Authority based on expertise are insufficient to overcome these differences. Trust had to be developed individually in the context of specific relationships.

Literature and Theory

Although employees in organizations are increasingly being asked to collaborate with colleagues across boundaries previously left inviolate, little research has been carried out on the subject. If the theoretical literature on postmodern organizations is reflective of some significant dimension of reality, then work in this area would be beneficial to many.

Literature

Existing research points at collaboration as a tool for innovation. The theoretical perspective for this has predominantly been that of knowledge creation, use, and distribution. For example, emphasizing the contribution collaboration makes to innovation, Goes & Park (1997) tentatively concluded based on a study of 400 California hospitals over 10 years, that cooperative relationships among distinct and related organizations were believed to enhance innovation. In particular, structural, institutional and resource-based links were all related to innovation in hospital services and technology. Other research has suggested that collaboration increases the quality of strategic decisions (Lessard, 1994). Other research utilizes the constructivist frame of organizations as systems of distributed knowledge for studies or discussions of the importance of moving across traditional boundaries in organizations (Brooks, 1994; Tsoukas, 1996). Finally, several researchers or theorists link cross-boundary collaborations to enhanced organizational learning (Richter & Vettle, 199X; Steensma, 1996; LeRoy & Ramanantsoa, 1997; Harvey, Palmer & Speir, 1998; Martiny, 1998; Kilmann & Kilmann, 1995).

Theory

Using Corbin & Strauss' (1990) strategies for grounded theory, two of the researchers asked themselves what seemed out most importantly to stand from the study regarding the question of what made the collaboration work. Both researchers were struck by the role interpersonal relationships played in making the program a reality. To integrate knowledge and interpersonal relationships requires a shift away from the economic conceptualization of knowledge as a commodity present in much of the research literature on collaboration and a shift toward knowledge as three tiered: (1) my knowledge, (2) my culture's knowledge, (3) and technical knowledge.

The creative production of new knowledge comes from the intersubjective negotiation of what is true and reasonable. Thus, facilitating cross-boundary collaborations in which both culture and interests are different seems to require attention to the dimensions of knowledge, the enabling of interpersonal relationships, and presence of a community in which the exchange of knowledge and opinions can freely occur. A university is in many ways

uniquely situated to produce unfathomable amounts of innovative new knowledge through the encouragement of collaboration. Distinctions are made among types of knowledge, faculty are free to move in time and space and cultivate relationships, and a sacred tradition of academic freedom guarantees the right to a community of freely exchanged knowledge and opinions.

Unfortunately, the historical norms present in much of industry whereby knowledge is often uncritically viewed as only technical, interpersonal relationships are limited by control of employees time and movement in space, and a unified culture is valued over diversity mitigate against the kind of innovation in knowledge to which universities can lay claim. Once any barriers were cleared in the central administration, collaboration on initiating the MHRDL Program was facilitated by the possession of valuable knowledge by both parties, the tradition in universities for faculty to move across boundaries of time and space, and the protection of free speech. However, because authority based on expertise is insufficient to overcome differences and because no legitimate authority cut cleanly across all of the boundaries involved, the development and maintenance of trust and interpersonal relationships were critical.

Conclusion

Tsoukas (1996) and Brooks (1994) have both argued that organizations are systems of distributed knowledge. Tsoukas, drawing on interpretive philosophy, ethnomethodology, Bourdieu's sociology, and discursive psychology, has gone on to assert that this means they are decentered and without an omnipotent "mind." This means that the organizational problem facing firms is the use of knowledge which is not and cannot be recognized through only one agent. No single agent can determine prematurely what kind of practical knowledge will be pertinent when relevant and where important. Knowledge of a firm cannot be monitored wholly and is not self-contained. It is innately indecipherable and endlessly shifting.

As organizations are increasingly faced with the unpredictability and fragmentation of a postmodern world, collaborations are becoming ever more common as a way of augmenting to address new challenges. The MHRDL program was begun on the foundation of an earlier program and drew on relationships and knowledge sources that themselves were unpredictable and fragmented. Although upper management enabled and advocated for the program, no one could have rationally planned and implemented a blueprint for its realization. Rather it was the multiple types of knowledge, the freedom to develop formal and informal human relationships in the workplace, and the long tradition of a community of that enabled the multiple parties both within and outside of the organization to contribute their knowledge to the program's success.

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An Examination of Teaching Pedagogies in Entrepreneurial Education, a Historical Examination

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This paper discusses some of the results of the 1997 national Survey of Entrepreneurial Education and compares the findings to four earlier national surveys conducted from 1979-1992. The results of the data, based on earlier surveys, indicate a trend toward greater integration of practical applications and technology into the teaching pedagogy of entrepreneurial education. The 1997 survey shows similar trends.

Keywords: Entrepreneurial Education, Pedagogy, Small Business Management Skills

In 1997, The George Washington University's School of Business and Public Management conducted the " The National Survey of Entrepreneurial Education ". The survey offered the academic field of small business management and entrepreneurial education an opportunity to present its new and expanded role in the teaching of small business and free enterprise to a generation of new and prospective entrepreneurs and students, both in the United States and internationally.

This paper will first provide the reader with background literature in the field of small business management and entrepreneurial education and some of the major differences and similarities between them. Next, there will be an examination of course structures and pedagogies in small business management and entrepreneurial education. The paper will then provide the results of the 1997 National Survey reflecting the "current state" of entrepreneurship and small business management education.

Literature Review

Growth in Small Business Management and Entrepreneurship Courses

Since the late 1960's, entrepreneurship education has been spreading around the world at an ever increasing pace (Vesper, 1985). Applied education in entrepreneurship can be traced as far back as 1938, to Shigeru Fujii, Professor Emeritus, Kobe University, Japan (McMullan and Long, 1987). Grant Moon of the U.S. Small Business Administration reported that prior to 1953, only the University of Illinois offered a course in "small business or entrepreneurship development" in the United States (McMullan and Long, 1987). In 1958, Dwight Baumann, an engineering professor at MIT, introduced what may have been the first course in entrepreneurship in the United States (McMullan and Long, 1987).

Sexton and Bowman (1984) reason that both government emphasis on small business development and prevailing economic conditions were playing a crucial role in the expansion of small business management and entrepreneurial course offerings. Plaschka & Welsch, (1990) also indicated that, a parallel was discovered in the rapid growth of small business management courses with the rapid growth of small businesses in the United States.

Most fundamentally, the growth in these types of courses may be influenced by the fact that teachers and students both enjoy them (Vesper, 1987; Vesper & McMullan, 1988). Though course offerings were increasing in number, demand for small business management and entrepreneurship courses was growing at an even greater rate (Vesper & McMullan, 1988), in part because student demand was high (Fernald & Solomon, 1993).

In order to understand both the growth of small business management and entrepreneurship courses, it is important to establish a conceptual difference between these two educational types-a differentiation that, too often, the literature fails to make (Zeithaml & Rice, 1987).

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Differences between Small Business Management and Entrepreneurship Courses

In attempting to distinguish differences between small business management and entrepreneurship courses, however, one should perhaps not overlook their similarities. The focus of both small business management and entrepreneurship education programs are to provide a breadth of creative managerial skills and knowledge that is the "closest approach to the original concept of professional management education offered at colleges and universities" (Zeithaml & Rice, 1987). Most often, courses in both areas tend to focus on the total firm. They provide coverage of the problems involved in planning, implementing and operating a small business for managers and owners, in regard to how to start-up a business and how to conduct ongoing activities.

Small business courses at the post-secondary level were first established in the 1940's (Sexton & Bowman, 1984) and dealt primarily with the managing and operating of small, existing companies. Entrepreneurship courses, which first emerged as academic offerings in the 1960's, had as their major focus, the activities involved in originating and developing new growth ventures (Guglielmino & Klatt, 1993; Marchigiano-Monroy, 1993). The conceptual difference is often blurred in both the academic and real worlds. Generally, small business management covers considerable information on how to successfully manage the business in order to expect normal sales, profits and growth. This includes coverage of planning and organizing the business, selecting and leading employees, business operations, marketing goods and services and financial planning and control. On the other hand, entrepreneurship courses emphasize information in which the principle objectives of the entrepreneur are profitability and growth. Entrepreneurs are usually seeking rapid growth, immediate and high profits and a possible quick sellout with a large capital gain.

In summary, teaching entrepreneurial skills and desired learning objectives of the two educational types, small business management and entrepreneurship are in fact different. The traditional objectives of small business management programs have been to provide students with management "know-how" relating to "setting goals and objectives, leading, planning, organizing, and controlling from a small business perspective" (Fernald & Solomon, 1993, p. 103). Entrepreneurial education has had as its focus an action orientation primarily embodied in teaching students how to develop a business plan (Ronstadt, 1985).

Course Structure and Pedagogies

Existing Pedagogical Approaches

Given there is reasonable support for the need to provide small business management and entrepreneurship courses, the prevailing issue is: what pedagogues are most appropriate for transferring entrepreneurial skills and knowledge?

Ronstadt (1985) characterizes the "old school" method toward small business and entrepreneurship education that:

> ...took an extreme, action-oriented approach to the subject. The motto of the old school was decidedly "go out and do it now". The business plan served as the academic heart of these courses. The rest of the curriculum was provided by experienced visitors who provided interesting stories, practical advice, and inspirational motivation (p. 23).

Other teaching methods described included literature reviews, interviewing of entrepreneurs, working with a start-up entrepreneur or the start-up of a small-scale business by a class. A survey conducted by Ahiarah (1989) revealed that the most used pedagogical tool for teaching small business management and entrepreneurship was a combination of lectures and cases. The second most used tool was special projects, which include live cases or case formulations. Other assignments included oral and written presentations, guest lectures, business plan preparations, and the use of films and videos. It is interesting that both Hills (1988) and Ahiarah (1989) found that assigned readings were the least preferred method.

Emerging Pedagogical Approaches

The "old school" as described by Ronstadt (1987) was beginning to give way to new methods of teaching small business and entrepreneurial skills. These new methods were arising from an increased understanding of entrepreneurship (Ronstadt, 1987) and a better understanding of entrepreneurship students. Porter and McKibbin (1988) have suggested that entrepreneurship education is moving towards integrative, comprehensive, and holistic programs. Sexton and Upton (1987) have proposed structuring courses around the psychological needs of entrepreneurship students. They conclude from their research that:

> entrepreneurship students can be depicted as independent individuals who dislike restraint, restriction, and the routine. They are capable of original thought, especially under conditions of ambiguity and uncertainty. Many of them need to develop better communication skills and to become more aware of how others perceive their behavior (Sexton & Upton, 1987, p. 38)

These conclusions lead Sexton and Upton (1987) to propose those courses should be relatively unstructured and "pose problems which require novel solutions under conditions of ambiguity and risk". Additionally, an increasing awareness of the special needs of adult students (Weinrauch, 1984) and minority students (Mann, 1990) is leading to an assessment of how small business management and entrepreneurship can best be taught.

Survey Methodology

The George Washington University developed a survey to examine the current state of entrepreneurial education in the United States. The survey developed was based on similar surveys used in 1979-1992. Minor changes were made to further track any new teaching trends and any new courses being offered. The survey was sent out to two-year community and junior colleges, four-year colleges and universities and international universities and colleges. The survey asked the educational entities if they offered small business and entrepreneurial educational programs. Also, the survey examined the extent and breadth of courses, seminars and workshops being offered existing and new. Finally the survey examined the teaching methods and trends used in the courses, seminars and workshops being offered. A copy of the questionnaire can be found at http:// www.gwu.edu/~nes.

An analysis of the data from our surveys, relative to the teaching and evaluation pedagogies employed by two- and four-year colleges, universities and international colleges in regard to course and seminar offerings in small business management and entrepreneurial education, is the focus of this next section.

Findings

For Table 1., the 1997 data indicate what teaching methods were offered. They include: (1) case studies (2) lectures of business owners development of business plans; (3) guest speakers; (4) research projects; (5) community development; (6) on site visits; (7) creation of business plans; (8) discussions; (9) small business institute counseling (10) feasibility studies (11) internships. The data indicate that the major evaluation pedagogy for all educational institutions surveyed was 1) Creation of business plans (87%), 2) Case studies (78%) and 3) Guest Speakers (69%).

For Table 2., the 1997 survey also inquired about the most popular courses being offered. For 2-Year Colleges, Small Business Management was the most popular course followed by Small Business Finance followed by New Venture Creation. For 4-Year Universities, New Venture Creation was the most popular course followed by Small Business Management and then Small Business Consulting. For 4 year colleges, New Venture Creation was the most popular course followed by Family-Owned Business and then by Small Business Finance. For International Colleges and Universities most popular course was New Venture Creation followed by Small Business Management and then Small Business Consulting.

Discussion of Results

To further understand the results of our survey, we examined the data from four historical surveys on small business management and entrepreneurial education (George Solomon,). The results of past surveys indicated a similar growth pattern in small business management and entrepreneurship course offerings.

For Table 3., the historical data (1979-1992) indicated that for 2-year colleges, the major evaluation pedagogy for the entire length of study were tests (41%). However, cases (19%) and business plans (17%) were becoming more widely used as evaluation pedagogy in both the small business management and entrepreneurship.

The historical data also indicate that for four-year colleges and universities, the number one choice as evaluation pedagogy for the entire length of the study were tests (26%). However, business plans (20%) and Small Business

Institute consulting (19%) and cases (16%) closely followed as preferred evaluation pedagogies. Therefore, both the 2 and 4-year colleges and universities preferred the test format as the evaluation pedagogy.

Table 1

Breakdown of Teaching Methods of Educational Institutions

	2 Year university	4 Year college	4 Year university	International colleges
Case studies	29	105	13	15
Lectures by business owners	19	80	9	13
Guest speakers	21	100	11	13
Research projects	18	66	5	8
Community development	1	23	2	1
On-site visits	7	47	4	8
Creation of business plans	30	127	13	17
Discussions	22	82	10	9
Small business institute counseling	1	55	0	8
Feasibility studies	5	37	4	3
Internships	9	52	2	5

Note. Total respondents: n = 209 Educational Institutions.

Table 2

Breakdown of Courses Offered by Educational Institutions

	2Year university	4 Year college	4Year university	International colleges
New venture creation	9	86	12	11
Small business management	25	68	1	9
Creative management and creativity	4	18	4	4
Small business consulting	3	58	4	5
Small business finance	13	48	5	4
Home based business	3	4	1	0
Women based business	3	6	0	1
Venture capital	1	27	2	0
Technology entrepreneurship	3	20	2	1
Innovation	3	17	2	3
Small business strategy seminar	9	32	5	3
Franchising	4	15	0	0
Family-owned business	5	23	6	4
Team building for start-ups	5	6	1	0

Note. Total respondents: n = 209 Educational Institutions.

Table 3

Small Business Management and Entrepreneurial Education Programs and Major Project Assignments

Year of the Study	1979		1982		1986		1992		
	2 Year Colleges		2 Year Colleges		2 Year Colleges		2 Year Colleges		
Major Projects, Tests and Experiential Learning Activities	Small Bus.	Entrepre-neurship	Small Bus.	Entrepre - neurship	Small Bus.	Entrepre - neurship	Small Bus.	Entrepre - neurship	Frequenc y
Tests	85	1	64	12	131	14	80	3	390
Business Plans	26	6	24	3	46	27	28	5	165
Cases	34	2	40	10	23	4	50	14	177
Consult Small Businesses (SBI)	0	0	1	0	2	0	2	0	5
Interview Entrepreneurs	5	1	3	0	2	0	6	2	19
Simulations	3	0	4	1	10	0	14	2	34
Individual Projects	8	0	10	1	12	0	10	1	42
Group Projects	4	0	8	1	8	0	3	1	25
Other									
4 Year Colleges and Universities									
Tests	43	13	52	15	96	42	142	64	847
Business Plans	33	14	34	20	55	58	81	92	734
Cases	39	13	24	17	41	32	72	48	463
Consult Small Businesses (SBI)	32	10	37	3	56	11	151	44	279
Interview Entrepreneurs	3	0	1	1	4	4	7	7	46
Simulations	4	4	5	4	8	10	10	7	52
Individual Projects	9	2	12	6	20	15	23	10	97
Group Projects	3	3	6	5	14	8	17	12	68
Other	12	2	16	27	27	10	56	14	89

Conclusion

Our 1997 survey indicates that the trend discovered in the 1977-1992 surveys have continued in a similar manner. The data also indicated that experiential teaching and evaluation pedagogies are increasingly being employed. The growth of small business management and entrepreneurship courses is an academic phenomenon, which is not likely to dissipate soon. More importantly, given the rise in course offerings, endowed chairs, majors and research, it is important not to lose sight of the uniqueness of the phenomenon under discussion and investigation -- the entrepreneur and small business manager/owner.

We believe based on the data presented in this paper, that there is a need to abandon more traditional forms of teaching and evaluation methods for more unique, unconventional ones. This opens the door for new paradigms of teaching and learning. Self-directed learning methods may help answer the growing needs of students by having personalized projects such as creating a business plan as their primary evaluation pedagogy. If the students are moving away from tests and favoring 'project' centered educational techniques, it makes sense to create a class environment that facilitates it.

Another consideration to be taken into account is to start applying technology in entrepreneurship and small business courses. As colleges and universities are beginning to realize that long distance learning is an integral part of learning, entrepreneurship and small business courses need to capitalize on this opportunity. The Internet is playing a major role in allowing this new type of education to take place.

Given the trends to date, it is hoped that educators and trainers will continue to move toward more unconventional, experiential-based teaching and evaluation methods. Traditional paradigms will not work when the focus of the learning is to broaden horizons and perceptions and, in fact, move individuals to a different plane of thinking and action where the focus is for them to become "Paradigm Pioneers" and to blaze new trails for others to follow.

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Examination of Critical Issues for Development and Implementation of Online Instruction

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This descriptive and exploratory study examined several critical issues affecting the development and implementation of online instructional programs. The intent of the study was to (a) help online program instructors, administrators, instructional designers, and technology developers understand the unique challenges and opportunities presented by online instruction; and (b) expand the base of knowledge regarding this new form of instructional delivery. The study has direct implications for online program development in HRD.

Keywords: Distance Learning, Online Instruction, Instructional Design

A primary goal of university level Human Resource Development (HRD) programs is to prepare professionals for leadership roles in HRD. HRD units in corporate America are responsible for employee training and professional development, with billions of dollars spent each year on education and training services. The importance of HRD has heightened in recent years due to technological advances in the workplace, concerns about the quality of education possessed by entry level employees, and the change toward more participatory organization structures and management practices. Efficient and effective training and development of the workforce is critical for helping corporations of all sizes adapt to change and remain competitive. Consequently, demand is high for well-trained HRD professionals who can effectively manage a wide variety of HRD roles and functions.

As the importance of private sector training continues to grow, a parallel growth in the need for professional development opportunities is evident. While most university HRD programs offer master and doctoral degrees in HRD through on-campus programs and traditional off-campus delivery means (e.g., distance education using television or audiographic systems), there is an increasing need to reach prospective students who are unable to commute to campus or participate in traditional remote offerings. To better serve the large numbers of working HRD professionals who desire professional development and advanced degrees, graduate programs are starting to create Internet-based courses that reach the widely distributed off-campus audiences not being served through traditional delivery methods.

Numerous issues must be addressed when developing and implementing online instructional programs. Some of these issues include factors that directly affect learner performance such as the knowledge and skills one brings to the instructional environment and the technologies used to deliver and support the instruction (Rothwell & Kazanas, 1998). Other issues of equal importance are the need to develop faculty skills in instructional design and technology use (Threlkeld & Brzoska, 1994; Willis, 1994), providing instructional technology training for the students who enroll in online programs (Willis, 1993), and establishing a technical support system to address the needs of both the instructors and the students (Willis, 1993, 1994).

Problem Statement

Although online instruction is gaining prominence in the delivery of advanced HRD degrees, little theoretical or empirical research has examined the critical issues affecting the development and implementation of online HRD graduate programs. To address this need, a descriptive and exploratory study of an online HRD Master degree program at a large Midwestern university was conducted in 1998. The purpose of this study was to (a) help online program instructors, administrators, instructional designers, and technology developers understand the unique challenges and opportunities presented by online instruction; and (b) expand the body of knowledge regarding this new form of instructional delivery.

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Research Questions

The following questions guided this examination of critical issues for online instructional development and implementation:

- What technologies are used for online instruction?
- What technical knowledge and skills are needed by students, instructors, and program developers to successfully participate in online programs?
- What training is needed by students and instructors before and during their participation in online programs?
- What are the technical support needs and requirements of online programs?

Review of Literature

Rapid developments in information technology have made possible a new method of distance education called *online instruction*. Online instruction can be defined as an innovative type of instruction that is delivered to remote audiences over the Internet (Khan, 1997). The Internet provides an opportunity to develop new learning experiences that were not possible previously (Alexander, 1995). One of the advantages of online instruction is that information/content can be delivered to any computer that has access to the Internet, anywhere and at any time. Harasim (1989) argues that online education is more than a new delivery mode. It is a learning domain that enables learners to engage in learning interactions more easily, more often, and perhaps more effectively, but also results in qualitatively new and different forms of educational interactions (p. 62). Even though online instruction is being rapidly adopted by many educational institutions and businesses to deliver instruction (ASTD, 1997), little is known about the critical issues that affect the development and implementation of online graduate programs. From the program developers perspective, a new understanding of these issues is critical for the development and implementation of quality online instruction.

One important area of online development and implementation neglected by research is the degree of technical knowledge, skills, resources, and support needed by students, instructors, and program developers. Even though technology is becoming very popular, the use of computers for instructional purposes is still not widespread and the lack of knowledge and skills in relation to hardware and software issues can create much frustration (Hill, 1997). The lack of knowledge and skills for online participation and development leads to the need for training. In this respect, the training of students and instructors has received some attention from researchers. Instructors must be trained, not only to use the technologies, but also to apply the technologies to their instruction (Franklin, Yoakam, & Warren, 1996). Also, because technologies must be updated to capitalize on new capabilities, skills must also be systematically updated to maintain the user's ability to employ the evolving technologies. Franklin, Yoakan, and Warren (1996) conclude that instructor development and training contributes more to an online system's success than any other factor. Beyond the instructors, the program developers and technical support staff also need to be well trained because the quality of an online program depends greatly on the expertise of the development team.

Methodology

This descriptive and exploratory study examined critical issues affecting the development and implementation of an online HRD masters degree program offered by a large Midwestern university. Started in June, 1998, the online program consists of a series of eight courses in human resource development and is being taught to a geographically dispersed cohort. The online graduate program was designed for individuals currently working in, or aspiring to, positions in human resource development.

Program Participants

A total of 23 individuals, mainly HRD professionals from corporations in the Chicago area, comprised the student body for this online cohort program. Though most students were from the Chicago area, one resided in Connecticut and a second was based in Georgia. Most students had considerable work experience in human resource development, with an average of over 4 years HRD-related employment. The participants had strong educational backgrounds with some of them pursuing their second masters degree. Demographically, the students were a very diverse group (i.e., 17 females/6 males; 5 minority students; age range from 25 to 50).

Data Collection and Analysis

A multi-method approach was used to identify issues affecting the development and implementation of online instruction. Data were gathered in this study using a wide range of methods including in-depth interviews, surveys, observations, and document analysis. Specific data sources included personal notes from participants, minutes and notes from project team meetings, and electronic data records (e.g., e-mail messages, WebBoard archives, IRC Chat logs, and synchronous activity logs).

Technology resource analysis. An examination of the technology resources required by online students featured analysis of hardware, software, and support systems necessary for participation in the program. The analysis of this area included a comprehensive "environmental scanning," a canvassing of comparative software reviews conducted by independent organizations, an inspection of computer system requirements for the software chosen for the online program, and testing of various hardware configurations to assess respective performance levels.

Technical knowledge and skill requirements. One goal of this study was to determine the technical knowledge and skills needed by instructors, program developers, and students who are involved with online instructional programs. To identify the technical knowledge and skills required by online instructors and program developers, two different methods were used: "environmental scanning" and in-depth open-ended interviews with key informants. Online programs identified through the environmental scanning were analyzed from a variety of perspectives, including the type of technology and communication tools used, instructional design approaches, synchronous and asynchronous activities, and course web design and navigation interfaces. Data regarding the knowledge and skills needed by instructors and program developers were supplemented with data obtained from open-ended interviews conducted with program participants, instructors, and developers.

Two methods were used to determine students' needs: observations and open-ended interviews. Three beta testers were observed while they navigated the course web site, completed exercises, and participated in synchronous and asynchronous activities. A checklist guided the observation process. This observation instrument was developed based on an in-depth analysis of the class web site and a list of tasks and procedures students would follow to participate in the online class. Once the beta testers finished reviewing the online course, they were interviewed to assess various aspects of their experience. Data from the observations and open-ended interviews revealed the knowledge and skills needed to successfully perform in the online program.

Training needs analysis. Structured surveys and document analysis were used to identify the training needs of students. The structured survey was used as a diagnostic tool that was completed by students prior to the start of the online class. Data from the structured survey of student training needs were analyzed using common statistical analysis. Documents collected during the program delivery were analyzed using a document analysis form. The researchers coded the related documents by relevant topic and different training needs. Observations and open-ended interviews were used to identify the training needs of the instructors. Specifically, the "participant as observer" approach was used (Creswell, 1994). Data revealing the training needs of instructors prior to and during the online delivery were obtained from observation notes kept by the researchers.

Technical support analysis. Strongly related to the analysis of technology resources is the technical support provided by the program. The difference in these variables, however, lies in the depth of analysis being conducted. During this phase of the study, the focus was on the forms of support services provided by the online program, how they were used by the stakeholders (e.g., toll free phone support, chat spaces, e-mail, Instant Messenger, personal visits, etc.), and the nature of the problems encountered (e.g., types of problems and their solutions). These data were in the form of descriptive narratives, frequency counts, recurring theme/category depictions, and frequency of occurrence mapping.

Results and Discussion

The results of this study are summarized in four sections that address critical issues for the development and implementation of online instructional programs. The issues deemed most critical include the technology resources used in online programs, the knowledge and skills needed to participate in online programs, training issues that need to be addressed by program developers, and the type of technical support that should be provided. Collectively, the following information can guide the development and implementation of online instructional programs.

Technology Resources Used in Online Programs

Appropriate technologies must be selected in order to achieve full and effective participation by online students and instructors. Based on a combination of (a) environmental scanning, (b) canvassing of software reviews, and (c) hardware requirement inspections and configuration tests, the following analysis identifies key technologies that support online program development and utilization.

A comprehensive analysis of online programs implemented by universities located in the United States and abroad was conducted. An analysis of over 150 online instructional programs and courses was carried out to identify common practices for course design and technology utilization. Based on this review, several conclusions can be made:

1. Email and web-based technologies form the core of most online courses.
2. Few online programs currently utilize audio and video conferencing technologies.
3. Few online programs use proprietary technologies in the delivery of their courses.
4. Most sites use technologies that conform to open industry standards (i.e., W3C standards).
5. On the minority of sites that utilized them, a blend of multimedia technologies were employed, such as streamed video clips and a modicum of animation and applets.

Once the basic technologies were identified from the environmental scanning, an analysis of independent software was conducted to determine the best software for utilizing these technologies. Based on that analysis, it was possible to conclude that the most applicable software for future online programs are:

- Eudora Pro 4.0 (e-mail)
- RealPlayer 5.0 (multimedia)
- Netscape 3.x or Internet Explorer 4.x (web browser)
- AOL Instant Messenger 2.0(paging/messenging)
- Winsock FTP LE 95 (file transfer)
- Microsoft Office 97 (production)
- Acrobat Reader 3.0 (document sharing)

To further identify technology resources appropriate for online programs, technology reviews in online and paper-based industry publications were examined. Several trends from these reviews were apparent:

1. With little surprise, industry standard software, such as Microsoft Office and Netscape's Communicator, are viewed as the best, or near the best, in their respective categories.
2. Cross-platform availability, reliability, cost, ease of use, and customizability are central factors common to most technology review/selections.
3. Compliance with accepted industry standards, accessibility support, and advanced features are occasional factors in the reviews.

Hardware configuration requirements. To ensure that students use computer systems capable of supporting the technologies selected for use with online programs, all technologies listed above were reviewed for hardware specification requirements. These requirements were developed based on tests using multiple hardware configurations to measure performance levels and to develop final recommendations and requirements. The minimum and recommended specifications for a Windows-based system are shown in Table 1.

Table 1
Minimum and Recommended Systems for Participation in Online Programs

Minimum Configuration	Recommended Configuration
• 486process running at 100 MHz	• Pentium 166 MHz Processor (or faster)
• 16MB RAM	• 32MB RAM
• 200MB available disk storage*	• 200MB available disk storage*
• 14.4 modem	• 28.8 modem
• 16-bit sound system	• 32-bit sound system
• 4x CD-ROM	• 12x CD-ROM

Note. * Storage space estimates the amount of space required to store all of the applications (Microsoft Office, etc.) and the work/data files generated by the students during the course of the program.

Technical Knowledge and Skills Needed to Participate in Online Instruction

Building on the technologies identified for online instruction, key informants, instructors, and program developers were interviewed to determine the knowledge and skills required to use the selected technologies to support their role as instructor, program developer, or learner. Also, three beta testers were observed and interviewed. Results are presented below in two parts: (a) the knowledge and skills required to develop and conduct online instruction and (b) the knowledge and skills required to participate in online programs.

Knowledge and skills required by developers and instructors. The development of online instruction requires that both the instructors and the program developers know basic operation of word processing and presentation software, multiple web browsers, and HTML editors. In addition, program developers need advanced knowledge and skills for creating multimedia files, to transfer files from development machines to servers and, for some online programs, the ability to design database systems using software such as ColdFusion or Microsoft Access. For synchronous activities, developers and instructors also need to be able to broadcast and archive live audio and use text chat to interact with students. Additional skills include the management of e-mail and threaded discussion group software as well as chat functions. Possessing the knowledge and skills needed to implement these functions are very important for program development, management, monitoring, and troubleshooting. Table 2 provides a summary of the specific knowledge and skills required by instructors and program developers, by phase and by application.

Knowledge and skills required to participate in online programs. Data from observations and open-ended interviews conducted with the three beta testers revealed that to fully participate in an online instructional program, including both synchronous and asynchronous sessions, students should have basic skills in using web browsers, threaded discussion groups, and e-mail applications. Table 3 presents a summary of the specific knowledge and skills needed to effectively participate in online delivery.

Training Needs of Online Students and Instructors

The following description of training needs of students and instructors was derived from data collected through use of a structured survey, interviews, and electronic data archives. In addition, numerous experiences were gained through the development and implementation of an online degree program in HRD over the past year. The following section identifies the training needed by both the students and the instructors of online programs.

Training needed by students. An analysis of the online students' technology resources and capabilities was conducted to determine if the students in the program had adequate computer resources and the skills needed to participate in online instruction. Based on this analysis, technology training was clearly the type of training most needed by the majority of the students. For example, most of the students did not have the skills necessary to download software from the Internet or use a Web Browser to conduct searches or install plug-ins to play multimedia files. Specifically, training was needed in advanced uses of web browsers and use of communication tools such as e-mail and WebBoard. In addition to providing training on the use of the new technologies for online instruction, the students needed to be trained to install software and troubleshoot problems when they occurred.

The necessary technology training was provided in several forms First, an orientation session was designed and implemented during the first class session. Computer applications and tools used for the online instruction were presented and explained in order to familiarize the students with the technology. Second, before the beginning of the course, the students were required to complete an orientation assignment located on the course web site. The assignment included tasks that helped the students gain the necessary skills needed to participate in the online class, such as sending e-mail attachments, posting messages in WebBoard, and listening to audio files. The third form of technology training involved hands-on practice with the specific technologies to be used by the students. Step-by-step explanations were integrated into the instruction early in the course and students were encouraged to practice using the new technology.

Technology training was perceived as a way to avoid frustration, wasted time, and potential dropouts. Technology training was also perceived as a critical event to be accomplished before presenting actual course content. Training is critical because the online students want to be confident in using technology before they engage in the learning the content. The students perceive technology training as a way to be better prepared to learn the content.

Training needed by instructors. The instructors and teaching assistants involved with the first two online courses in the program were asked to identify the type of training they needed prior to and during their participation in the online program. Different types of training needs were identified prior to the start of the online program, including (a) orientation training, (b) communication-skills training, and (c) technology usage training. The instructors indicated that if a good orientation training program was offered prior to the start of the online program, training during the courses would not be as necessary unless there are changes or updates in the technologies being used.

Table 2
Technology Knowledge and Skills Required by Program Developers and Instructors

Software Function	Software Applications	Specific Knowledge and Skill Requirements	
		Program Developers	Instructors
Document Creation	Word Processing	Create and format documents using tables and borders. Convert documents to HTML file	Create and format documents using tables and borders Convert documents to HTML file
	Presentation Software	Create instructor presentations, use templates, add clip art, print, and record narrations. Create presentations for use on the Internet	Create instructor presentations, use templates, add clip art, print, and record narrations. Create presentations for use on the Internet
WWW Access	Web Browser	View and navigate WWW, use search tools and bookmarks, use plug-in to play multimedia files, and download programs from Internet.	View and navigate WWW, use search tools and bookmarks, use plug-in to play multimedia files, and download programs from Internet.
Communication & Collaboration	E-mail	Create, forward, and reply to messages and send attachments. Sort incoming mail and create mailing lists	Create, forward, and reply to messages and send attachments. Sort incoming mail and create mailing lists
	WebBoard	Post, delete, and attach files to a message and participate in chat sessions	Post, delete, and attach files to a message and participate in chat sessions
	RealEncoder	Broadcast live audio and archive audio files	Broadcast live audio and archive audio files
Web Page Development	HTML editors	Create and edit Web pages. Use templates, forms, images, multimedia files, and advanced HTML tags	N/A
	Database	Write and test scripts to create and maintain online grade books	Provide grades and feedback and download students' assignments
	File Transfer	Upload and download files to the course server	N/A
Multimedia Development	PhotoShop	Create and edit images	N/A
	Digital Video	Create and edit streaming video	N/A
	Scanning	Scan texts and images	N/A

Table 3
Technology Knowledge and Skills Required by Program Participants

Software *Function*	Software *Applications*	Specific Knowledge and Skill Requirements for Participants
Web Access	Web Browser	View and navigate WWW, use search tools and bookmark, use plug-in to play multimedia files, and download programs from Internet
Document Creation	Word Processing	Create, format documents using table and border functions
Communication and Document Exchange	E-mail	Create, forward , and reply messages, and send attachment
		Sort incoming mail and create mailing list
	WebBoard	Post, delete, and attach files to a message and participate in chat rooms
	Various Software	Install, use, upgrade, troubleshoot software
	Database	Submit assignments and access instructor feedback and grades

An orientation training session for online instructors and teaching assistants was considered an essential element to the success of an online course. The following five essential components of an orientation training program were suggested by the instructors:

1. *General overview of the online program*. The first component of an online orientation training program should provide instructors with a general overview of the program, processes involved in using the online instructional system, and how they are supposed to work with instructional designers, web designers, database developers, and technical support. In short, there should be a clear orientation so the instructor understands the structure of the entire program and can better determine their roles and responsibilities. Another element considered important is the organization's vision of the online program as well as its importance to the organization.
2. *Description of the differences between online and face-to-face instruction*. Regarding the differences between these two types of delivery formats, instructors felt that those who have not experienced teaching online should be provided with an introduction to the differences between online and face-to-face instruction. Specifically, the level of detail needed for online delivery and the importance that details play in this type of instruction need to be emphasized. The instructors felt they should be trained on how to adapt face-to-face strategies to online environments. Also, because of the environment in which instruction is delivered, instructors felt they should be introduced to more innovative teaching strategies. In other words, the orientation-training program should provide them with a set of varied teaching options that can be effectively carried out in online environments.
3. *Differences between synchronous and asynchronous delivery*. Training should help instructors better prepare for synchronous and asynchronous delivery formats. For the synchronous sessions, they should be informed about strategies that promote individualized instruction and encourage active participation. For asynchronous sessions, instructors felt they should be prepared to manage time more effectively, learn how to be instructionally flexible, how to provide timely feedback without getting burnt out, and how to create and manage virtual teams.
4. *Communication skill training*. The online instructors felt that oral and written skills are probably much more important in online instruction than in face-to-face instruction. The lack of personal contact and the inability to see people's gestures puts a major burden on oral and written communication. The instructors felt that some information should be provided on how to effectively address online students and how to provide feedback and constructive criticism without being perceived in a negative way. They felt that good online communication skills are necessary because mistakes are more likely to be noticed by online students than face-to-face students. Finally, they suggested that this type of training should provide them with information on how to develop their skills to better interact with students, both formally and informally.
5. *Technology use training*. The instructors and teaching assistants stated that it is essential to know how to use the technology and be able to diagnose and solve common problems. They felt it was necessary to have technology training to get them to the level of feeling comfortable using the technology to interact with people. The instructors felt that they should be provided with many opportunities to gain "hands on" experience. They felt

that the best training is the one that most closely simulates the reality of online instruction. The instructors and teaching assistants recommended that they be provided the opportunity to practice in simulated environments until they attain the level of confidence necessary to perform naturally. One-on-one training was found to be effective in learning to master the new technologies.

Other topics that were mentioned as important for an instructor training program included copyright and fair use issues, institutional intellectual property rights policies, how to foster and assess deep learning, strategies for better preparation and time management, and how to facilitate collaborative learning online.

Technical Support Needed for Online Programs

Technical support is a critical aspect of any online program. Without a mechanism for supporting online instructors and students, frustration is sure to occur. The following listing of technical support for online programs was developed based on an analysis of the types of problems faced by instructors and students as they participated in an online program. This information is organized according to (a) the nature of the technology problems confronted and their resolution, and (b) the forms of technology support offered within the program—both initially and currently.

Nature of technology problems. An analysis of e-mail messages, technical support logs from a toll-free telephone support line, and archives from Instant Messenger communications provided a clear picture of the types of problems encountered by students and instructors, their frequency, and the reporting methods used. During the first online course, 90% (n = 34) of the requests for assistance occurred during the first half of the course. E-mail was the most common method used to report problems and request technical assistance (86% of all requests). Approximately 50% of the students used the technical support services, with an average of 3.5 support requests per student. Regarding the type of problems being reported, the most common problem was associated with an organizational firewall at a students' place of work that affected the delivery of audio and video files and prevented access to collaboration tools such as WebBoard and IRC chat. Other frequently reported problems were related to the lack of web browser skills, inaccurate use of e-mail functions such as attachments, and server problems due to external causes such as severe weather conditions in the form of storms and lighting. During the development of the first course, a total of 11 different types of problems were reported. These were problems related to email, browsers, WebBoard and its chat function, RealPlayer, server malfunctions, technical terminology, acknowledgment of messages and document submissions, and PowerPoint presentations.

An analysis of technical problems during the second online course revealed similar results. In this case, 92% of the support requests were for assistance during the first half of the course. The number of students requesting assistance increased slightly from the previous course, from 50% of the students in the first course to 61% in the second course. During the second course, access problems due to firewall constraints at a student's work location was a common problem, followed by problems with RealPlayer, and difficulties associated with uploading assignments to the course database. The uploading feature of the database was a new feature in the second course. During the development of the second course, there was a decrease in the types of problems reported. A total of 9 different types of problems were reported. These were problems related to the introduction of a new database for uploading documents to the instructor, server malfunctions, PowerPoint files, access to the we site, and access to the WebBoard and ChatBoard due to changes in IP numbers. Three other problems came from new students joining the cohort. These problems were related to the use of speakers, volume, and printers.

Forms of support offered. Given the types and frequency of technical problems from the first two online courses, as well as the prior expectations of potential obstacles, multiple support features were implemented in an effort to reduce the number of technical problems experienced by the online instructors and students. As a result, a comprehensive support system was created for the online program. Initially, only e-mail support and a toll free telephone line to provide access to online staff during normal business hours was provided. While these forms of support were adequate for most technical problems, there were instances where immediate assistance was required during non-business hours. To that end, additional support features were developed and implemented, including a set of Frequently Asked Questions (FAQ) that contain solutions to various problems, the availability of Instant Messenger for 1-to-1 and small group conferencing, and 24-hour chat-based support provided through a "Help Desk" manned by the university's Web Technology Group. With these five support options in place, virtually all of the technological support needs of the online students and faculty can be met satisfactorily.

Summary

This paper examined a variety of critical issues related to the successful development and implementation of online instructional programs. While many of these issues are taken for granted when planning traditional face-to-face instruction, they must be carefully considered when venturing into the realm of online programs. Programs delivered entirely online cannot simply be modifications of existing courses, rather, they must be viewed as completely new delivery systems that present different and unique problems. Online program developers need to carefully analyze the context and source of problems that arise and design appropriate interfaces, technology solutions, and support mechanisms to resolve the difficulties that will be faced by both the instructors and the students.

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The History of Human Resource Development in Taiwan from 1949 to 1999

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This paper traces the history of HRD strategies and policies adopted in Taiwan since 1949. Contrary to the general belief of most Taiwanese scholars that HRD in Taiwan is a new field, this paper points out that the roots of HRD in Taiwan originated in the 1950s. This paper further posits three functions that the HRD system serves, seven patterns drawn from the evolution of HRD, and an HRD definition that is derived from the patterns and functions of HRD in Taiwan. Extent literature is relied on for the information presented.

Keyword: HRD in Taiwan (Republic of China), International HRD

Taiwan is one of the world's most densely populated countries. According to census figures (GIO, 1997), the population was over 21.4 million as of December 1996. Of these, about 9.3 million are classified as human resources; that is, they are over 15 years old and have the ability to work. Approximately 6.26 million are paid workers, as opposed to those who are self-employed or have some other working status. There are about 5.7 million males and 3.6 million females. In addition, 25-49 year olds are about 70% of the total labor force.

A low unemployment rate (2.81% in 1997) (CEPD, 1997) has been recognized worldwide as one of Taiwan's great achievements. In recent years, a shortage of labor has become a major concern. The number of skilled workers, though increasing dramatically, is unable to keep pace with demand (Hardee & Johns, 1988). The diverse needs and problems of such a large population and work force on this small island are the main challenges faced by Taiwan. Developing these human resources has been a main issue. Taiwan has built a solid foundation of labor-intensive industry by using its abundant and relatively less expensive labor force efficiently. Human resources have been critical in enabling Taiwan to succeed economically.

Problem Statement

The question to be answered within this paper is, "What is the history of HRD in Taiwan from 1949 to 1999?" The Nationalist government moved from China to Taiwan in 1949, and 1999 is the present. Within this question, there are four purposes: (1) to trace the history of HRD strategies and policies adopted in Taiwan since 1949; (2) to identify patterns from the evolution of HRD in Taiwan since 1949; (3) to posit the functions the HRD system serves in Taiwan; and (4) to posit an HRD definition that is derived from the patterns and functions of HRD in Taiwan.

Methodology

This paper is developed based on relevant publications (government and academic) and other secondary materials on human resource development (HRD) strategies in Taiwan and their role in Taiwan's economic development. The primary sources of data are various official publications of the Executive Yuan, the Ministry of Education, and the Council for Economic Planning and Development in Taiwan. Secondary sources are scholarly periodicals, internet protocols published either in Chinese or English, and pertinent books published either in Taiwan or the U.S. These materials were then patterned in a combination of chronological and topical order. Then the patterns were interpreted.

Theoretical Framework

In Taiwan's case, HRD is receiving much more attention recently and is now highly valued (Chen, 1997; Chen & Mink, 1995). It has aroused the attention of both scholars and the business/industry sector. Many Taiwanese HRD studies have been published in Taiwan and the U.S. during the 1990s. During the early 1990s, scholars in Taiwan

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were interested in the effects of employer-sponsored training on labor productivity (Lyau, 1994). Lyau's study showed a positive, significant relationship between training and labor productivity at the firm level in Taiwan. In the middle of the 1990s, researchers turned to identifying the competencies HRD professionals should have and the roles HRD practitioners should play in Taiwan. For instance, Lee (1994) indicated that 34 HRD competencies and 12 roles of HRD professionals identified in Taiwan were similar to the competencies and roles in the U. S., as identified in a study conducted by ASTD (McLagan & Suhadolnik, 1989).

Cross-cultural HRD is also attracting attention. Chen and Mink (1995) examined the relationships between organizational climate and HRD practices between American and Chinese corporations in Taiwan. By using Lippitt's (1982) Human Resource Development Assessment Inventory, they found that the organizational climates and HRD practices in U. S. American firms and Chinese firms in Taiwan were different. Lin (1991) investigated the differences and similarities of management philosophy, organizational climate, and managers' learning among U. S. American subsidiaries, Japanese subsidiaries, and local Taiwanese firms in Taiwan. One of her major findings was that supervisors in Taiwanese firms participated most actively in company-sponsored learning programs, whereas supervisors in Japanese subsidiaries participated least actively.

In spite of this interest, however, no study, surprisingly, has indicated what HRD really is, that is, what the definition is of HRD in Taiwan. Two of the researchers mentioned earlier used the definitions of HRD originated in U.S. studies. Lee (1994) used McLagan and Suhadolnik's (1989) definition of HRD in his study. Also, Lee (1995) in his study took Walker's (1982) definition that HRD is the process of analyzing an organization's human resource needs under changing conditions and developing the activities necessary to satisfy these needs. Surprisingly, neither author explained why they picked these two definitions.

However, several studies that explored HRD activities in different countries all conclude that, although the majority of HRD principles applied internationally originated in the U.S., the nature and purposes of HRD activities differ in each country, as does its definition (Elliott, 1998; Harada, 1998; Hillion & McLean, 1997; Wee-Liang-Tan, 1998; Yan & McLean, 1997). The U. S. definition and functions do not completely apply to other countries.

Thus, without a review of HRD's history and its roots in Taiwan (or any other country), a comprehensive definition of HRD for that country cannot be established. Taiwanese scholars and researchers need to define what HRD is and to determine what functions the HRD system serves in Taiwan.

Research Findings

The review of literature revealed the following themes as critical in responding to the research question posed for this paper.

Recognizing the Importance of Developing Human Resources

The linkage between education and productivity has been the subject of numerous studies in the literature of both economics and of sociology (Lucas, 1981; Meyer, 1977; Ming, 1994). Taiwan's economic success supports the idea that developing human resources through education has an important bearing on economic growth.

In Taiwan, HRD has been a key strategy for economic growth since its beginning with a strong emphasis placed on education and vocational training by the Taiwan government. As early as 1911, when the Ching Dynasty was overthrown, Dr. Sun Yat-Sen, founder of the Republic of China, set a goal of basing the nation on the Three Principles of the People–Nationalism, Democracy, and the People's livelihood (MOE, 1996). It was essential to implement a new education system before the country attained this goal.

In 1929, before moving to Taiwan Island, the National government put forth the educational goal of fulfilling the ideal carried in the Three Principles of the People. Geography and history were to be taught to build a sense of Nationalism, lessons on social life and conduct were to be given to demonstrate the operation of Democracy, and vocational skills were to be taught to meet the Principle of Livelihood (MOE, 1996). Vocational education was emphasized by the founder of the country from its beginning.

Vocational Education

Taiwan has a skilled and productive work force to keep it competitive in the world market (Galenson, 1979; Kuo, 1983). As vocational education grew, so did Taiwan's industries. This did not happen by chance but was the result of a careful design. Many studies in the U.S. and Taiwan have established a positive relationship between economics and vocational education (Gustman & Steinmeier, 1982; Land, 1990; Lucas, 1981; Yuen, 1993).

Research has also indicated that vocational education has provided the skilled labor force that has contributed to economic development in Taiwan during the last several decades. Lucas (1981) also found that, without the efficient and highly skilled work force, Taiwan would not have held her economic advantage.

Origin of vocational education in Taiwan. In 1949, when the Taiwan Nationalist government was established on Taiwan Island, various forces and events were at play to shape the future of vocational education in Taiwan. The current vocational education system in Taiwan was imported in the 1950s from the U.S. (Chang, 1991; Chen & Shih, 1989; Land, 1976). In the 1950s, the U.S. government offered several projects to help Taiwan, among which was the Industrial Vocational Education Cooperative Project. A contract financed by the International Cooperation Agency was negotiated between Taiwan Normal University and Penn State University to establish a department of industrial education and a department of home economics. The two departments, established in the spring of 1953, marked a milestone in the history of Taiwan vocational education.

Proactive progress of vocational education. From the 1950s, Taiwan's policy on vocational education has been proactive, progressive, and constantly changing to meet manpower needs to attain its national objectives. Vocational education has been carefully planned and developed over the past forty years to meet this demand and challenge. To some extent, one of the major factors contributing to successful economic development in Taiwan is the quality and quantity of the well-educated and highly-skilled workforce provided by vocational education.

Because of the import-substitution policies initiated in the late 1950s and the export-promotion strategy in the 1960s, labor-intensive industries were chosen as the main thrust in Taiwan's economy (Hwang, 1991). The reform of vocational education policy was important in providing the human resources needed in the increasing labor-intensive industries at that time. The ministry increased the ratio of students in high school to those in vocational schools from 6:4 to 3:7 in 1981 to encourage the establishment of vocational schools. From the early 1970s to the early 1980s, the number of students admitted to senior high schools was gradually reduced, while the number of senior vocational school students increased. A parallel development was the increasing importance of high-quality facilities, curriculum, and faculty in vocational education. For instance, in 1972, a program was funded by a subsidiary loan from the United World Chinese Commercial Bank for equipment for senior industrial vocational schools. In 1973, the National Taiwan Institute of Technology was founded. In 1979, the first part (1979-1981) of a plan for improving senior industrial vocational education was implemented.

A diversity of vocational training sponsorship was attained by 1974 due to the establishment in 1972 of a National Vocational Training Fund, financed by a payroll tax of 1.5%. Two participating organizations that benefited from these programs were the Tung Yuan Electrical Works and the Yue Loong Motor Company. The Tung Yuan Electrical Works set up an apprenticeship training program in 1958 providing both theoretical and practical training, but it did not establish a formal training center until July, 1973. The Yue Loong Motor Company, the largest automobile producer in Taiwan, was the site of a vocational training center in the metal trades; it held six-month courses for about two hundred participants. It seems that, in view of the difficulties that most countries have had with public vocational education, the Taiwan sponsorship scheme has made for a more effective program.

Events of the past few years of the 1970s indicated that the industrial sector was gradually entering a new era of secondary import substitution (Ranis, 1979). To meet the challenge of the resulting relative increase in the labor shortage, the Taiwan government increased the budget for vocational education. For instance, in 1982, the government implemented the second stage of the advanced plan for industrial vocational education (1982-1985). That budget was more than NT$3,137 million, which was almost twice the amount spent on the first stage of the plan. In 1985, another NT$2,170 million was spent on the third stage. In 1992, the Ministry of Education implemented the "Prolonged National Education Based Upon Vocational Education" program. This program was developed to increase the work skills of youths who did not want to study in a general education curriculum.

Contributions of vocational education to a skilled work force. No research has shown what role vocational education and training have actually played in Taiwan's economic success. A few studies have shown that vocational students are less likely to be underemployed than general high school students (Wang & Hsieh, 1995). Wang and Hsieh (1995) found that male vocational business high school students were less likely to be underemployed than male general high school participants. To be underemployed meant that an individual is working less than he or she would like–and yet they are counted as employed in official statistics (Henderson & Poole, 1991).

The official opinion was that vocational education supplied the pervasive infrastructure undergirding the national economy (Harbinson & Myers, 1964). The effect of increased investment in vocational education on economic growth can be addressed by considering the impact of education investment on society's ability to produce (Hopkins, 1977). Another measure of the return of such investment in vocational education is the proportion of a nation's total production going to human capital (Hopkins, 1977). Thus, in Taiwan's case, the fact that there is a significant relationship between economic effect and vocational education (Gustman & Steinmeier, 1982; Land,

1990; Lucas, 1981; Yuen, 1993) is further evidence of investing in human capital. Some other studies indicated that the excellent work force results in Taiwan are from outstanding vocational education (Chen & Shih, 1989).

Integrating HRD with National Economic Strategies

Taiwan has been internationally recognized as having made great strides in its economic and technological developments in the past forty years (Galenson, 1979). There are many elements contributing to this success, but the most important one is the effective utilization of the abundant and high quality human resources (Lee, 1995). Since 1953, the Taiwan government has included "improving human resource quality" as a major component in the series of plans to develop systematically its economy. For instance, the major tasks outlined in the sixth four-year plan (1973-1975) were to speed up industrial modernization, expand infrastructural construction, improve manpower quality, and promote exports (CEPD, 1996). Further, in the seventh four-year plan (1973-1981), setting up manpower development was one of the major tasks in promoting energy efficiency, improving industrial structure, promoting balanced economic and social development, and completing the Ten Major Development Projects (CEPD, 1996).

In Taiwan, HRD exists in conjunction with other strategies to meet national economic objectives. A pluralistic approach to HRD has been adopted in Taiwan. The Ministry of Education (MOE) has major responsibility for vocational education, while the Council of Labor Affairs (CLA) is responsible for labor affairs, employment services, and vocational training. Other ministries involved with vocational training include Economic Affairs, Youth Council, and the Vocational Advisory Committee for Retired Servicemen. The coordination of human resource planning at all levels rests with the Council for Economic Planning and Development (CEPD) of the Executive Yuan, which undertakes macro-studies and formulates human resource policies.

Public in-service training programs are subsystems for providing HRD as adopted by the CLA. In a broad sense, public in-service training means training that is geared toward society at large; whereas, in a narrow sense, public in-service training is limited to the training implemented by vocational training institutions which are administered by the Employment and Vocation Training Administration (EVTA) under the CLA. Currently, there are 13 public Vocational Training Centers (VTCs) providing 8,425 training slots. Training programs cover 104 trade areas in metal processing, automotive maintenance and repairs, electrical engineering, electronics, computer information, construction, printing, and service industries. Any Taiwanese citizen who is over 15 years old or a junior high school graduate can enroll in pre-employment training for employable skill training. They also will be assisted to obtain employment by the government after completing the training.

Studies have shown a high degree of success in public in-service training. Land (1990) indicated that job placement records showed a high degree of success, and that many youngsters aspire to enter the training programs. Between 1984 and 1997, a total of 13 VTCs offered entry-level and advanced training to more than 292,530 trainees (EVTA, 1998a). Of this number, 112,266 trainees were enrolled in basic training programs and 180,264 trainees were enrolled in advanced training programs. Both total and advanced training program numbers have increased in the past 10 years. Trainees numbered 14,638 in 1985, 22,221 in 1990, and 28,253 in 1997. Trainees for advanced training programs numbered 7,069 in 1985, 15,175 in 1990, and 17,337 in 1997 (EVTA, 1998a).

Establishing Pluralistic Human Resource Development Delivery Channels

Since the 1980s, the Taiwan government has been very concerned about the development of and coordination among various government training centers and training plans. Having a strategic national economic plan in which HRD strategies are integrated is insufficient--what is required is an innovative and pluralistic approach to develop human resources and cooperation among government and local agencies. The pluralistic channels of Taiwan's local HRD systems include enterprise training provided by various institutions, including CLA's training service teams, the Small and Medium Enterprise Administration (SMEA), the Chinese Human Resource Management Association (CHRMA), and Human Resource Development Association (HRDA).

Training services provided by the Council of Labor Affairs (CLA) include enterprise training programs provided by public VTCs and cooperative or apprenticeship training (EVTA, 1998c). Enterprise training is also called employer-sponsored training. It has been defined by Vaughan and Berryman (1989) as "training available in or through the auspices of the firm" (p. 1). Lyau (1994) defined employer-sponsored training as "a systematic intentional process of altering an employee's permanent behaviors with an aim to contribute to the firm's effectiveness, and such process, which may occur outside of the firm, is through the auspices of the firm" (p. 23). This definition implies that training is provided by the employer only as it relates to organizational goals.

According to the Vocational Training Law legislated in 1981 and still in effect, firms are obligated to report their training to the Bureau of Employment and Training (BET) within two months after the end of the fiscal year. Since 1988, the BET has conducted an annual Vocational Training Survey (VTS) within both the public sector and private organizations (Taiwan's BET, 1992a) and the "Vocational Training Needs Survey" (VTNS) (Taiwan's BET, 1992b). Both surveys specified several occupations to be included in enterprise training.

What is the status of enterprise training in Taiwan? In the 1970s, local Taiwanese firms were unable to utilize their high-level human resources effectively and had difficulty in adapting to environmental changes (Negandhi, 1973). Negandhi found that training programs in Taiwanese firms were not well-developed for operatives. The large-scale VTS survey in 1985 indicated that "high labor mobility" was considered the most important reason for not conducting enterprise training (cited in San, 1988, p. 107). Not until the mid-1980s were enterprise training systems begun by some U. S. American companies in Taiwan (Chen, 1997).

One approach to overcoming the high cost in training and a high turnover rate is through enterprise training service teams monitored by CLA to provide small and medium-sized firms with technical services, subsidies, tax exemptions, and other incentives. Currently, there are six major approaches used in promoting enterprise training by the EVTA (EVTA, 1998c). Under this promotion policy, over 898 business enterprises in Taiwan have established training departments offering training to up to 590,000 employees annually (EVTA, 1998b). In 1996, the CLA assisted private enterprises in setting up 43 vocational training centers which have completed training for nearly 1,450 job hunters, as well as on-the-job training for more than 23,090 workers (GIO, 1997). In addition, a nation-wide network of 63 employee service centers offering career counseling and planning, labor education services, welfare, and other programs served 60,000 employees in 1994. A regional Labor Education Promotion Team in each city and county also offered a total of 13,172 training programs to over 477,336 laborers in 1995 (GIO, 1997).

Associations founded locally, such as the Chinese Human Resource Management Association (CHRMA) and the Human Resource Development Association (HRDA), are two major organizations comprised primarily of human resource professionals. They have positioned themselves to help local industry and government to create another economic miracle in the future. Despite its short formal history, the CHRMA, established in 1992, has positioned itself to enhance professional skills among members; to promote cooperation among industry, academia, and government; to improve HR management in small and medium enterprises; to provide the government with recommendations for policy-making and legislation; to establish direct communication channels with mainland counterparts that cultivate mutual exchanges of experience and the sharing of information; and to participate actively in international HR organizations and other professional activities in order to survey international trends for the local HR community (CHRMA, 1996). The major goals of the HRDA are to strengthen human resources within business organizations, enhance labor relations, strengthen productivity, and support the development of the economy in Taiwan (HRDA, 1993). Despite their short history, both organizations are dynamic, professional groups to which most human resource practitioners and business managers in Taiwan belong. They are deeply committed to elevating the nation's HRD and management, as well as its business and national competitiveness.

Discussion

After reviewing and investigating Taiwan's HRD strategies and policies adopted by the government since 1949, the authors summarized them into three parts: (1) patterns drawn from the evolution of HRD in Taiwan; (2) HRD functions in Taiwan; and (3) an HRD definition in Taiwan.

HRD Patterns

Seven patterns were drawn from the above review:

1. Because the organization responsible for the development of HRD policy is under the jurisdiction of the Council for Economic Planning and Development (CEPD) of the Executive Yuan, past and present HRD policy in Taiwan has shown great interest in promoting economic growth.
2. The pattern of in-service training provided by the Vocational Training Centers (VTCs) under the jurisdiction of the Employment and Vocational Training Administration (EVTA), a pragmatic mixture of government- and private-enterprise-sponsored institutes, seems to have worked well (Galenson, 1979).
3. Senior vocational schools and Vocational Training Centers (VTCs) often emphasize immediate placement of young job seekers with basic occupational skills instead of training them for long-term job security.

4. Autonomous HRD systems at provincial, municipal, and local levels have not been established to develop regional HRD programs.
5. Because of the high risks and costs involved in HRD programs, and high labor turnover rates, there is still a lack of participation of private firms in providing enterprise training to employees.
6. HRD and management associations founded locally but serving nation-wide are developing and growing rapidly and are attracting more and more attention from HR professionals and scholars, business and industry leaders, and local communities.
7. The government's commitment to develop human resources through formal vocational education and informal vocational training is a long-term goal.

HRD Functions

The HRD strategies and policies adopted by the Taiwan government since 1949 and the patterns above led to the following three functions of Taiwan's HRD system:

1. From a macro-economic point of view, HRD helps make laborers more employable, decreases unemployment, and enhances economic growth. For instance, youth develop work-related capabilities through senior vocational schools and in-service training programs offered in Vocational Training Centers (VTCs).
2. From a social point of view, HRD helps disadvantaged people develop needed skills for jobs. The VTCs provide vocational training for the handicapped and the "Skill Testing and Certificate" regulations encourage those who do not want to pursue a further academic degree to be certified for further employability.
3. From a scientific and technological point of view, HRD improves labor's skill levels, upgrades technological levels, increases mobility, and reduces structural unemployment. Workers can pursue higher grades of skill certificates and upgrade their skill levels in the VTCs. The training programs and research and development activities sponsored by the Council of Labor Affairs and the Small and Medium Enterprise Administrations allow workers to update their technical and professional skills. Finally, the services of career counseling and planning provided by the Information and Service Centers of the CLA help laborers with career development.

HRD Definition

So, what is the definition of HRD in Taiwan? Ideally, there should be one definition of HRD developed for Taiwan that makes the concept of HRD clear and distinct. It should describe its nature and basic qualities in explicit terms–what it does, for whom, and why. Scholars in Western countries have indicated that "HRD has yet to agree on one definition and some assert that it will not likely do so" (Ruona & Swanson, 1992, p. 1). The authors agree. Any definition of HRD will change from time to time as its concept, scope, and delivery methods are expanding and changing to meet the needs in internal and external environments.

From this review, the definition of HRD that emerges is: *A systematic, intentional, innovative, and long-term committed process of developing an individual's work-related learning capability through education and training with an aim to contribute to individual, organizational, and national growth.*

The purpose of education and training is emphasized through development and growth. To achieve HRD's intended goal, participants need to be developed for the long-term. Education and training focus on the individual. Individuals are the mediating forces through which development occurs and the impact of HRD is experienced. Finally, HRD is work-related. The organization and the whole nation grow through the work of each individual.

Conclusion

This brief review of the evolution of HRD policies and strategies adopted by the Taiwan government since 1949 provides an interesting and unique case study of HRD as a national strategy that might be useful for other countries. The Taiwanese government recognized early the importance of investing in human capital and of committing to develop human resources to promote national economic growth. Since the 1950s, the government has integrated macro-economic HRD strategies with other national economic objectives. Further, through a pluralistic approach which has been planned, implemented, and evaluated by multiple governmental departments, people in Taiwan have different channels for pre-employment training, advanced training, job transfer training, second expertise training, and vocational training for the handicapped. Finally, people in Taiwan have easy access to employee services, such as career counseling, career planning, and labor education nation-wide.

Finally and most importantly, this paper posits three HRD functions and an HRD definition based on the patterns drawn from the evolution of HRD strategies and policies adopted in Taiwan since 1949. It is the belief of the authors that knowing the origin of HRD practices, the evolution of HRD policies and strategies, and the functions of HRD systems is essential for a better understanding of the current HRD status and implications. The authors also hope that there is something to be learned from history.

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Expatriate Development for the Asia-Pacific Region: A Comparative Analysis of Expatriates from Five Countries Across Three Continents

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With increasing interests for business expansion in the Asia-Pacific region, expatriate development has become a critical international HRD issue for MNEs, who are taking active interests in expansion of their business operations in the potential region of Asia, despite the current financial crisis. There has been substantial empirical research on expatriate management in the west, but very little was found on Asia, and comparative studies are lacking. This paper presents the findings of a descriptive study conducted on key international HRD issues, specifically relating to training and development of expatriates from five countries representing the three major continents of the world (Singapore, Japan, Korea, Germany and USA) . The results provide significant information about the types of expatriate training programs, training contents, duration, delivery modes, and providers of effective training programs that would lead to productive expatriate performance in the Asia Pacific region.

Key Words: International HRD, Expatriate Training, Asia Pacific

Owing to rapid globalization of business activity, international human resource development (HRD) has become increasingly important in recent years. This is especially true when domestic human resource development takes on international dimensions as it deals more with multicultural workforce. International HRD, much of it embodied in cross-cultural training, has been proposed by many scholars as a means of facilitating more effective interaction among managers, employees and customers from different national-cultural backgrounds. Various reasons have been cited for this, the most prevalent being that such training is not thought to be necessary and thus top management sees no need for it. However, the fundamental reason behind the lack of training seems to lie in wrong assumption that good management is good world-wide (Black & Mendenhall, 1989; 1985; Black, 1988; Schwind, 1985; Runzheimer, 1984; Tung, 1981; 1984; Graham, 1985; Landis & Brislin, 1983; Brislin, 1981; Bouchner, 1982; Harris & Moran, 1979; Zeira, 1976).

Global and cross-cultural training and career development planning becomes necessary for managers in today's organizations, regardless of their domestic or international assignments (Osman-Gani, 1997, 1996; Marquardt & Engel, 1993; Odenwald, 1993; Reynolds & Nadler, 1993; Johnston, 1991; Rhinesmith, 1991). While much has been written on expatriate training and development in general, very little was documented on comparative analysis among expatriates from different national and cultural backgrounds, specially who are working in Asia. With Asian economies ready to take centre stage in the twenty-first century, despite the recent financial crisis, it is only logical that we should have a better understanding of the comparative expatriate management issues spanning the three continents. This study attempts to fill the research gap in this area of international management and international HRD literature, which by far focused mainly on the Western economies.

Until the recent regional financial crisis (since the last quarter of 1997), East Asia was one of the fastest growing regions in the world. According to the UN World Economic Survey, East Asia grew by an annual average rate of 4.5% during the last decade, while ASEAN's (Association of South East Asian Nations) average was at 6.8%. The comparable rate for the US was 1.4% and 1.7% for Europe. ASEAN member countries were ranked among the world's largest hosts of foreign direct investment inflows. At the same time they are becoming significant foreign investors themselves, mostly in other less-developed Asian countries. The OECD has projected the Asia-Pacific to grow by 5-6% to the year 2010. On the other end, the comparable rates for North America and Europe were set at 2-5% and 3-4% respectively.

USA, Germany, Japan, and South Korea are found to have extensive overseas business operations in the region, especially in the form of foreign direct investments (FDI). Among the Asian economies, Japan is the most export-oriented country, which is followed by South Korea and Taiwan. Singapore is a relatively new player in this game, but it has shown substantial growth in its overseas business performance during the last few years after the government's aggressive policy of Regionalization. However, the predominance of the literature in English has been on the American MNEs, followed by some Europeans with very little information on the training of expatriates

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for the Asia-Pacific region.

This paper reports the findings of a study conducted on the expatriates from these five countries working in the Asia Pacific region, with the view to obtaining descriptive accounts on the types of training programs considered important for preparing expatriates, the areas of emphasis in the training programs, the duration of such programs, the training delivery methods, and the agency that should deliver training so as to ensure greater effectiveness. In addition to the descriptive findings, the author also explored the differences in what the expatriates from these economies perceive on these aspects of training. The author chose to use expatriates as the source of data as they provide a relatively unbiased information being individuals who have been deployed on overseas assignments and who being "in the field," so to speak, could provide insights into the training needs of expatriates. Differences are expected in the training and development strategies in the light of differences in the domestic environments of the sending organizations. These differences may be due to socio-cultural, legal, political and economic environments of the countries, which are at different levels of economic development.

In order to address the issues on comparative expatriate development, the following research questions are formulated for this study:

1) Are there differences in the types of training programs that are considered to be important for preparing American, German, Japanese, Korean and Singaporean expatriates to take up overseas assignments in Asia?
2) What is the nature of difference among expatriates' views on several training content areas to be incorporated in an expatriate training program for Asia?
3) Are there differences in the views of appropriate duration for a pre-departure training program provided to the expatriates from the five countries?
4) What is the nature of difference in expatriates' views on appropriate training delivery methods to ensure effective expatriate performance in the Asia-pacific?
5) Are there differences among expatriates' views on who should deliver the training programs to ensure greater effectiveness of their performance?

Methodology

The research methodology for the study consisted of sample interviews, and a survey of American German, Japanese, and Korean expatriate professionals working in Singapore. The survey also included a sample of Singaporean managers who were working overseas, and could be available in Singapore after completing or in the process of completing the assignment. A questionnaire was developed to collect data on several issues relating to training and development and other areas of expatriate management. In designing the questionnaire, some items were selected from previous surveys used in similar studies conducted in other countries, which were integrated with additional items developed from the findings of the interviews and the literature review.

A panel of experts comprising of university business faculty, and senior business executives, was consulted to verify the content, sequence, structuring and relevance of the questionnaire items. In addition, it was administered to a sample of forty expatriates each from America, Germany, Japan, Korea, and Singapore, in a pilot test. In the process, views and suggestions were gathered on further improvement to the questionnaire so that it is comprehensive enough to cover the relevant issues and is easy enough to complete by the expatriates. The questionnaire was administered personally to achieve a good response rate.

For the purposes of the study, the authors obtained stratified random samples of American (180), German (180), Japanese (180), Korean (170), and Singaporean (180) expatriates. The expatriates represented various multinational enterprises (MNEs) operating in three major business sectors in Singapore. Stratified random sampling method was used to draw the samples from the sampling frames of the five groups. The sampling frames were identified from the membership listings of the American, Japanese, Korean and German Chambers of Commerce and Industries in Singapore, and by consulting the "Singapore 1000" directory listing. The study focused on the companies from the three major business sectors representing the three classification strata of the study. Each stratum comprised ten companies from each of the three major business sectors: Manufacturing, Transportation/Logistics, and Financial Services. These three sectors were found to cover most of the MNEs based in Singapore. The classifications of the three major industrial sectors were taken from the Singapore Standard Industrial Classification.

A total of 501 completed questionnaires were obtained. Of these, 150 were from the Japanese sample (response rate of 83.33%); 103 questionnaires were obtained from the Korean sample (response rate of 60.59%); 72 questionnaires were from the American sample (response rate of 40.0%); 80 questionnaires were received from the

German sample (response rate of 44.44%); and 96 completed questionnaires were received from the Singaporean sample (response rate of 53.33%).

Results

Respondents' Profiles

The representation of the expatriates from the three major business sectors is shown in Table 1 below:

Table 1
Distribution of Respondents by Industry and Economy

Economy Industry	Manufacturing (%)	Transportation/ Logistics (%)	Financial Services (%)
America	47.2	19.4	33.3
German	47.5	17.5	35.0
Korea	41.7	25.2	33.0
Japan	33.3	33.3	33.3
Singapore	57.3	19.8	19.8
Total	43.9	24.6	30.9

It can be observed from the above table that majority of the respondents were from the manufacturing sector (43.9%) for all countries except Japan, whose expatriates were found to be evenly distributed among the three sectors of this study. Respondents in the financial services sector were almost equitably distributed among the five countries with the exception of Singapore, where financial services and transportation sectors were relatively less represented. Transportation and logistics sector drew the least number of responding expatriates in this study.

From a demographic analysis of the responding expatriates, it was found that most of the respondents were of ages between 30 to 44 years old (68.4%), while there were no respondents under the age of 24 for Germany, Japan and Korea. Male respondents formed an overwhelming majority (89%) in all the groups of respondents. The Singaporean respondents manifest the similar imbalance although there is a relatively higher representation of female expatriates compared with the other countries. This gender imbalance is consistent with world wide trend of overseas assignees, and is not peculiar to the respondents of this study. Of the five groups of respondents, it appears that Korean, Japanese, and American MNEs prefer to send married expatriates whereas Singaporean companies were found to be open to both gender types.

In terms of the primary functional areas represented by the respondents, it was found that, overall most of the respondent (59.9%) were involved in general management and marketing functional areas. This may be due to the emphasis placed on the importance on these areas at the early stage of FDI in the Asia-Pacific region. Among them, German and Singaporean expatriates seemed to be more involved in General management areas, whereas Japanese Americans were performing marketing and sales functions, while Korean expatriates and were distributed among general management, finance, and marketing jobs.

Issues of Expatriate Training & Development

Training and development of expatriates should begin where the selection process ends. The basic aspects of expatriate development are, the development of expatriates before, during, and after overseas assignment; the orientation and training of expatriate families before, during, and after foreign assignments; and the development of the headquarters staff responsible for the planning, organization, and control of overseas operations.

Research has shown that expatriate training is often neglected or handled poorly in many international organisations. Baliga and Baker (1985) found that only 25% of the largest U.S. MNCs provide extensive pre-departure orientation programs. Tung (1981) also observed that only 32% of the U.S. companies surveyed provided some international training. Expatriate training seemed to be more prevalent amongst the European and Japanese MNEs, with 69% of the European and 57% of the Japanese multinationals rendered some form of training to their expatriates. Studies have also found that between 16% and 40% of American managers sent on overseas assignments return prematurely because of poor performance or because of the inability to adjust to the foreign environment. The costs for expatriate failure also include unquantified losses like damaged corporate reputation and

lost business opportunities. Clearly, some form of training is necessary to minimise expatriate failure (Baker & Ivanceich, 1971; Tung, 1981; Black, 1988; Harvey, 1989).

International training and development programs need to recognise the importance of bringing about attitudinal and behavioural changes in the expatriates and their families. Rahim (1983) proposed a model to guide the development of expatriates. The major developmental issues that need to be considered are summarised in this model, which emphasised the need for constant feedback to allow for evaluation of the expatriate's performance. It is also through these feed backs that corrective actions can be taken to resolve any difficulties the expatriate may be facing, thereby helping to improve the expatriate's job performance in the host environment. Mendenhall and Oddou (1986) proposed three critical areas in which the organizations should prepare their expatriates. These are: cultural training, language instruction training and orientation training on familiarity with everyday matters. Similarly, Rahim's model also emphasised these areas. Preparation can take place before departure, post-arrival or during re-entry. The aim of the preparation is to ensure the expatriate is familiar with the host-country conditions, culture and his family's needs in a new environment. Relative preference for the three types training were sought from the five groups of expatriates, and Table 2 presents the findings below.

Table 2

Importance of Pre-departure, Post-arrival and Repatriation Training

Expatriate Training	USA		Germany		Japan		South Korea		Singapore			
	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	F-value	P-value
Pre-departure training	3.07	0.95	3.40	0.74	3.26	0.81	3.22	0.64	3.48	0.82	3.146 *	0.014
Post-arrival training	3.71	0.93	3.46	0.94	3.34	1.03	3.72	0.78	3.70	0.85	3.991 **	0.003
Repatriation training	3.08	1.06	2.66	1.04	2.69	0.96	3.16	0.84	3.07	0.84	6.517 **	0.000

*(1= Least Important, ... 5 = Most Important) * = significant at 0.05 level ** = significant at 0.01 level

It can be seen that expatriates find the importance of pre-departure training at the home country and post-arrival training at the host country compared to the repatriation training. Japanese and German expatriates do not see the importance of repatriation training, while post-arrival training were identified as more important by all the groups. This signifies the importance placed on the learning need for relevant expertise required to conduct business at the host country by considering the socio-cultural and other environmental factors.

Types of Training

Tung (1982) identified six major types of cross-cultural training used by American, European and Japanese companies. They are: (1) environmental briefings used to provide information about such things as geography, climate, housing and schools; (2) cultural orientation designed to familiarise the individual with cultural institutions and value systems of the host country; (3) cultural assimilators using programmed learning approaches designed to expose members of one culture to some basic concepts, attitudes, role perceptions and customs of another culture; (4) language training; (5) sensitivity training designed to develop attitudinal flexibility; and (6) field experience, which sends the participant to the country of assignment to undergo some of the emotional stress of living and working with people from a different culture. Tung also observed that both American and West-European companies recognized the need for more rigorous training for the CEOs and functional heads than for trouble-shooters and operatives. In contrast, the Japanese films appeared to provide slightly more rigorous training for the operatives. Brewster (1988) observed that the emphasis placed by European and Scandinavian MNEs on pre-departure training, particularly language training, continues to be stronger than that of American multinationals. Feldman (1989) surveyed American firms regarding relocation programs regarding relocation programs and found that only 13% of the respondents indicated that they would offer expatriates an orientation program. McEnery and DeHarnais (1990) estimated through a review of American practices that between 50 and 60 per cent of American companies operating abroad do not provide any preparatory training for expatriates. Those that do provide such training, focus only on brief environmental summaries and some cultural and language preparation, and only half of

these programs would last longer than a week. Again, Barham and Devine (1990) found that European, Scandinavian, and Australian firms place less priority on providing pre-departure training for the spouse and family.

Derr and Oddou (1993) advocated cross-cultural seminars as a training method for internationalisation of managers. Baliga and Baker (1985) suggested that the expatriate receive cross-cultural training focused in the assigned region's culture, history, politics, economy, religion, social and business practices. They advocated a training program concentrated on a particular location as opposed to one in which expatriates are taught the broad differences in cultures and encouraged to be receptive to them. However, cultural training is not provided by many organisations. Dunbar and Katcher (1990) observed that only 30% to 45% of the MNEs offer relevant cross-cultural orientation to their expatriates. As Earley (1987) mentioned, a major objective of inter-cultural training is to help people cope with unexpected events in a new culture. Cultural training enables individuals to adjust more rapidly to the new culture and be more effective in their new roles. This cultural preparation is necessary for overseas assignment because financial ability alone does not determine success (Dowling, Schuler & Welch, 1994; McEnery & DesHarnais, 1990).

Language training is needed for successful and productive expatriate performance abroad and should form the part of any long-term management development program for aspiring global executives. Mendenhall and Oddou (1986) stressed that willingness to communicate does not refer to the level of fluency in a foreign language but rather the expatriate's confidence and willingness to use the host-country's language. Proficiency in a foreign language can improve the expatriate's effectiveness and negotiability strength, and can improve the expatriate's access to important information regarding the host-country's economy, government and market.

Practical assistance training makes an important contribution toward the adaptation of the expatriate and the family to their new environment. Some MNEs like Colgate-Palmolive (Lublin, 1992) believe that there is no substitute for on-the-job training in this regard. Ronen (1989) proposed a set of methods and techniques for intercultural training and identified the purposes for each of those methods. There is no unanimity among scholars in recommending a set of training methods and techniques or types of training that would be effective in all nations and cultures. This study aimed at identifying the effective types of training programs for the expatriates working in the Asia-Pacific region.

Research Question 1 : Are there differences in the views of expatriates from the five countries on the different types of training programs for preparing managers to take up overseas assignments in Asia?

In this study, the five groups of expatriates were asked to rate the relative importance of various types of training programmes that should be provided before going on overseas assignments. Six different training programmes were suggested in the questionnaire, and the respondents rated the following types of training in terms of their importance. Table 3 presents the findings with mean scores of the respondents' views.

Table 3
Important Types of Training Programmes to be provided for Effective Expatriate Performance

	USA		Germany		Japan		South Korea		Singapore			
Types of Training	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	F-value	P-value
Cross-cultural training	3.40	0.88	3.41	0.95	2.83	0.88	3.13	0.74	3.43	0.87	10.754**	0.000
Host country language training	2.85	0.99	3.09	0.96	3.45	0.93	3.61	0.98	3.50	0.96	9.363**	0.000
Family adjustment orientation	3.33	0.86	3.11	0.81	2.84	0.93	3.05	0.73	3.28	0.95	5.763**	0.000
Area Study	3.06	0.79	2.68	0.87	2.97	0.79	3.43	0.76	3.07	0.80	10.524**	0.000
Practical training on living conditions	3.11	0.90	2.74	1.11	2.55	0.84	3.00	0.74	3.02	0.87	7.840**	0.000
Overseas acquaintance trips	3.35	0.97	2.61	1.05	2.61	0.95	2.64	0.82	2.97	0.80	10.436**	0.000

*(1= Least Important, ... 5 = Most Important) ** = significant at 0.01 level

Host language training was rated as very important for pre-departure training by all expatriates, except the Americans. However, the American, German, and Singaporean expatriates placed greater importance on cross-cultural training. Prima facie, this finding appears contrary to prior studies on expatriate training indicating the importance of language training but can be explained by the fact that English is the main language of business in Singapore and many countries of the region. The American expatriates do not need training in English for deployment in Singapore and the German expatriates may have English language capability as English is a second language in German school curriculum. It is also interesting to note that overseas acquaintance trips were not considered as important by most of the expatriates whereas the American expatriates rated this as the second most important type of training (mean of 3.35). For the Korean, Japanese and Singaporean expatriates, overseas acquaintance trip is not important probably because they are familiar with the region. In the case of the German expatriates, this finding is interesting as America is further away in distance from Singapore when compared to Germany. Hence, it would not be possible to assert that the trips are not required as they are usually costly and time-consuming, and the marginal benefit derived from these trips over the other training programs does not justify the additional time and resource commitments. This difference could be explained by the fact that German companies have a longer history of overseas operation in Asia compared to the American companies. This situation may be compounded by the fact that it is traditional for managers to be rotated within the domestic confines of the United States with overseas appointments being the exception rather than the rule.

The ANOVA results show that there are significant differences in the views of expatriates, which can be seen from their mean response scores of importance. The author also conducted post-hoc analyses of the means that were found to be significantly different. The results are shown in Table 3a below.

Table 3a

Types of Training	Mean Difference									
	USA-Germany	USA-Korea	USA-Singapor	Germany-Japan	Germany-Korea	Germany-Singapor	Japan--USA	Japan-Korea	Japan-Singapor	Korea-Singapor
Cross Cultural training	-0.009	0.280	-0.020	0.580**	0.290	-0.010	-0.570**	-0.300	-0.600**	-0.300
Host country language training	-0.240	-0.760**	-0.650**	-0.370*	-0.520**	-0.410*	0.610**	-0.160	-0.040	0.110
Family Adjustment orientation	0.220	0.280	0.050	0.270	0.060	-0.170	-0.500**	-0.210	-0.440**	-0.230
Area Study	0.380*	-0.370*	-0.010	-0.300	-0.750**	-0.400**	-0.080	-0.450**	-0.090	0.350*
Practical training on living conditions	0.370	0.110	0.090	0.190	-0.260	-0.280	-0.560**	-0.450**	-0.470**	-0.020
Overseas acquaintance trips	0.730**	0.710**	0.380	0.002	-0.020	-0.360	-0.740**	-0.020	-0.360*	-0.330

* = significant at 0.05 level ** = significant at 0.01 level

The post-hoc analysis bears out the earlier observations on the importance placed by Korea, Japan and Singapore on host country language training; American and German expatriates do not rate it as highly important as them and there is no significant difference in the importance attached to it by the Americans and Germans. Similarly, the earlier observations on overseas acquaintance trips is borne out by the post hoc analysis. Table 5a shows that Korean and Singaporean expatriates place greater importance on area studies than the Americans, Germans and Japanese. This difference may be explained by the availability of information within these MNCs, who are more experienced in international business and their philosophy behind the pre-departure training. An observation is necessary on family adjustment orientation training. It is the type of training with no significant difference was found across countries, with the exception of Japanese, who rated this significantly different from the Americans and the Singaporeans. It is ranked as the third or fourth most important training in each group by their mean scores.

Training Contents

In designing training and development programs for expatriates, companies need to recognise the importance of multiple home-country and host-country role relationships. Rahim's (1983) model for developing key expatriate executives showed major relations between the expatriate manager and other parties interested in international business. The content, mode of delivery and training rigor are important factors in determining the success of training and development programs for overseas assignments. It is very important to identify the relevant areas of training content before designing an expatriate training program so that the required knowledge and skills are provided for effective expatriate performance. Osman-Gani and Toh (1995) conducted a study on more than 200 senior managers of Singapore-based companies involved in international business. The study covered several issues of training and developing managers for success in overseas assignments in the Asia-Pacific region. They identified several areas of training needs with specific content requirements. Seven broad areas were identified, knowledge in which were found to be critical for successful performance in overseas assignments. This study sought expatriates' views on these different training content areas for the Asia-Pacific region.

Research Question 2 : What is the nature of difference among expatriates' views on several training content areas to be incorporated in an expatriate training program for Asia?

In order to respond to the above research question, expatriates were asked to rate the relative importance of various training content areas which should be included in an international training program designed for expatriate managers and professionals. The respondents rated the relative importance of the seven areas. The mean scores together with the ANOVA results are presented in Table 4. Post-hoc analyses of the responses were also conducted on training contents for which significant differences were found in the means at different levels of significance.

Table 4
Important Areas to be Incorporated in an Expatriate Training Program

Training Contents	USA		Germany		Japan		South Korea		Singapore		F	P
	Mean*	S.D	Mean*	S.D	Mean*	S.D	Mean*	S.D	Mean*	S.D	-value	-value
General management factors	3.57	0.87	3.58	0.61	3.61	0.82	3.43	0.75	3.40	0.75	1.598	0.174
Human resource and labor factors	3.68	0.85	3.46	0.59	3.56	0.85	3.13	0.68	3.60	0.69	8.005**	0.000
Socio-cultural factors	3.58	0.82	3.51	0.84	3.27	0.78	2.86	0.70	3.53	0.72	14.252**	0.000
Accounting, financial and taxation factors	3.35	0.86	3.26	0.82	3.29	0.87	3.60	0.87	3.27	0.77	2.851*	0.023
Legal and environment factors	3.40	0.83	3.36	0.82	3.36	0.76	3.24	0.88	3.49	0.78	1.265	0.283
Production and Technology factors	3.25	0.90	3.25	0.80	3.20	1.11	2.90	0.71	3.23	0.80	2.662*	0.032
Marketing factors	3.40	0.93	3.46	0.95	3.23	0.76	3.30	0.78	3.43	0.84	1.469	0.210

*(1= Least Important, ... 5 = Most Important) * = significant at 0.05 level ** = significant at 0.01 level

General management training area was rated highly by all the five groups of expatriates. Ranked by the means scores, general management is ranked the most important by the Germans and Japanese, second by the Koreans and third by the Americans. It can be observed that there is a similarity in rating top three training content areas deemed important by the American and German expatriates: human resources and labour factors, socio-cultural, and general management. In contrast, the Korean expatriates consider issues concerning accounting, financial and taxation policies of the host country to be more important, followed by general management issues and marketing issues. It is interesting to note that the Korean expatriates did not consider the socio-cultural factors and production/technology factors as important training content areas relevant to their performance. The Japanese and Singaporean expatriates placed substantial importance legal and environmental factors. The post-hoc analysis reveals that the Koreans' mean score differ significantly from all other expatriates, whose means are not significantly different among themselves, in the areas of human resource and socio-cultural factors. This may be

owing to the Koreans' familiarity with the socio-cultural environment of the region, and with the specific job related factors that they would be dealing with. This can be contrasted with Osman-Gani & Toh 's (1995) findings where the top three preferred areas of training were general management, human resource & labour, and legal & environmental issues. Accounting, financial and taxation factors is the most important area for the Koreans. The background of the respondents may provide some explanation in this regard. However, Table 3 showed that there is no preponderance in finance and accounting as a primary functional area, although 20.6% of the Korean respondents have finance/accounting as their primary functions. The emphasis on accounting, financial and taxation factors may be a reflection of the Korean MNEs focus on financial controls as a means of strategic control.

Training Duration

Determining the right amount of pre-departure training for expatriates is not an easy task. If too little time is spent on pre-departure training, the expatriates may not be well prepared, which could lead to poor job performance and even premature termination of the expatriate assignment. On the other hand, if too much time has been spent for pre-departure training, the trainees may suffer from information overload and boredom, and the company may be spending too much resources. Among the various types of training programs for international managers, some last only few hours, others last for months. Some are fairly superficial, others are extensive in coverage.(Mendenhall & Oddou, 1988; Hodgetts & Luthans, 1994). The preferred duration of training for overseas assignment in the Asia-Pacific would vary widely with mean hours of 17 to 51 hours for a program depending on the type and contents of the program. The majority of the companies (54.35%) had pre-departure expatriate training programs of an average duration of one to four weeks per program in a year (Osman-Gani & Toh, 1995). This study aimed at identifying appropriate duration of pre-departure training program for expatriates working in Asia.

Research Question 3 : Are there differences in expatriates' views on the appropriate duration of a pre-departure training program for managers' overseas assignment in Asia?

To answer this question, the expatriates were asked to identify the appropriate duration for an expatriate training program to be conducted before taking an overseas assignment. Table 5 presents the findings of the expatriates' views in order of their importance along with the ANOVA results.

Table 5
Appropriate Duration for Pre-departure Programmes

Training Duration	**USA**		**Germany**		**Japan**		**South Korea**		**Singapore**		**F**	**P**
	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	-value	-value
1 day (8 hours)	2.25	1.18	1.45	0.75	1.56	0.88	2.01	0.94	1.66	0.94	10.346**	0.000
3 days (24 hours)	3.07	1.20	2.08	1.01	2.10	0.98	2.55	0.79	2.48	1.17	13.024**	0.000
1 week (40 hours)	2.79	1.29	3.01	1.25	3.03	1.10	3.01	0.92	3.19	1.09	1.329	0.258
2 weeks (80 hours)	2.00	1.10	3.36	1.15	3.01	1.23	3.36	1.02	3.02	1.25	17.174**	0.000
More than 2 weeks	1.75	1.34	2.36	1.21	2.99	1.46	3.84	1.20	2.42	1.28	30.888**	0.000

*(1 = Least Appropriate, ... 5 = Most Appropriate) ** = significant at 0.01 level

Table 5 shows that there are distinct preferences on training duration for expatriates from each economy. There is no commonly preferred specific duration for training indicated by the expatriates. What can be discerned from the mean scores for each group of expatriates is a distinct preference on the part of all expatriates (except Americans) for training to be of a longer duration. Only Korean expatriates' top preference for training was found to be more than two weeks in duration whilst others showed the preference for the duration of one to two weeks. In contrast, American expatriates preferred training to be of a shorter duration instead. Whilst the American preferences are not exactly in perfect descending order, they prefer training of three days, one week and one day as the top three preferences according to the mean scores. When the mean scores for each group of expatriates is

analysed using ANOVA, no significant difference was found in the scores for the duration of "one week," signifying the unanimity of preference in this respect.

Post-hoc analysis results reflect the significance of differences in the preferred duration of training among the groups. It may be observed that least significant differences were found among the Koreans and Singaporeans, as well as among Germans and Japanese. They only differed in "more than 2 weeks" category. Whereas Americans differed significantly with all the groups for almost all training duration categories.

Training Delivery

Selection of appropriate training delivery methods depends on many factors, the most significant one being the training rigor, which is again dependent on job and culture novelty issues. Research shows that training rigor is critical to the success of cross-cultural/expatriate training programs. The ability of a firm to determine the appropriate degree of training rigor needed for its global managers is the secret to cross-cultural training design. Black and Mendenhall (1989) presented a model showing the relationship of high and low rigor training with methods of delivery and time spent on training. According to them, low rigor training includes approaches such as lectures, films, area briefings, and books. Whereas high rigor training approaches are interactive language training, assessment centers, and sophisticated cross-cultural simulations. The duration of low rigor training was four to twenty hours, and for high training rigor, it is between 60 to 180 hours (Black, Gregersen & Mendenhall, 1992; Black, Mendenhall & Oddou, 1991; Black & Mendenhall, 1989; 1990). This study attempted to identify the suitability of various types of training delivery methods for effective expatriate performance in their overseas assignments in Asia.

Research Question 4 : What is the nature of difference in expatriates' views on appropriate training delivery methods to ensure effective expatriate performance in the Asia-Pacific?

Six most common training delivery methods used for expatriate training were identified through literature search, and the respondents were asked to rate the relative appropriateness of the methods to ensure effective overseas performance. The descriptive findings and the ANOVA results are presented in Table 6.

Table 6
Appropriate Training Delivery Methods for Effective Expatriate Performance

Training Delivery Methods	USA		Germany		Japan		South Korea		Singapore		F	P
	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	-value	-value
Lecture / classroom training	2.71	1.07	2.55	0.84	3.11	0.84	3.01	0.75	2.87	0.87	6.583**	0.000
Workshop / seminar	3.33	1.16	3.29	0.91	2.93	0.81	2.86	0.65	3.07	0.88	5.231**	0.000
Case-study / video system	3.11	0.99	3.28	1.01	3.21	0.94	3.12	0.85	3.23	0.89	0.493	0.741
Role play / Interaction	2.60	1.24	3.46	1.09	3.02	0.87	2.82	0.85	2.84	1.04	7.981**	0.000
Self-instructional training modules	2.53	0.96	2.42	1.08	2.97	0.92	3.10	0.75	2.49	1.10	10.153**	0.000
On-site (on-the-job training)	3.78	1.12	4.05	0.87	3.93	1.09	4.11	0.87	3.88	0.92	1.538	1.900

*(1 = Least Appropriate, ... 5 = Most Appropriate) ** = significant at 0.01 level

On-site or on-the-job training has been ranked as the most appropriate and effective training delivery method by all groups of expatriates. The ANOVA results show that there are no significant differences in the means for this delivery method among the groups. This could be because such form of training is by far the most direct (with one to one personal contact) form of instructional method. It provides trainees with an opportunity to learn through hands-on experiences under real-life business settings, and opportunities to clarify issues on the spot. The ANOVA results also show that there are no significant differences among the groups for the case-study/video system based training programs, which are very popular among the expatriate managers.

When the delivery methods preferred by each group are ranked by their means, one can observe similarity in the preferences between the Americans and the Germans. After on-site training which is common to all the groups, these two groups prefer workshops (American – 2nd; German –3rd), case study (American – 3rd; German – 4th), and lectures (American – 4th; German – 5th) in the descending order of preference (based on the ranking of the means). The only exception is role play, which is ranked 2nd most important by the German expatriates. The post-hoc analysis revealed that there is no significant difference between American and German expatriates in the mean scores for lecture/classroom teaching, workshop/seminar, and self-instructional training modules; the first two findings confirming the observation on the similarity in American and German preferences.

Asian (Korean, Japanese and Singaporean) expatriates appear to prefer delivery methods that are in one direction with less interaction where there is possibility of "loss of face" or public embarrassment. They appear to opt for situations of one to one or one to small group learning (e.g. on-site). Their aversion to interactive learning (workshop, lectures and case analysis) is seen in the preference for self-directed learning. The above findings are also consistent to a great extent with previous studies on international training and development.

Research Question 5 : Are there differences in the views of expatriates on who should deliver the training programs to ensure effective learning and performance in the Asia-Pacific?

In order to identify the effective providers of expatriate training programs, the respondents of this study were asked to rate the relative effectiveness of the various training providers. Table 7 presents the findings as follows.

Table 7
Effective Providers of Expatriate Training Programmes

Training Providers	USA		Germany		Japan		South Korea		Singapore		F	P
	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	Mean*	S.D.	-value	-value
In-house / company personnel headquarter	3.08	0.93	3.18	1.08	3.47	1.05	3.31	0.85	3.28	0.85	2.333	0.055
Host country subsidiary / partner personnel	3.69	0.93	3.63	0.86	3.53	0.90	3.68	0.86	3.60	0.93	0.617	0.651
Outside professional consultants	3.07	1.05	2.99	1.01	3.03	0.89	3.00	0.70	2.82	0.91	1.050	0.381
University / academic professionals	1.88	0.82	2.35	1.06	2.29	1.07	2.53	0.81	2.53	0.81	5.245**	0.000

*(1 = Least Effective, ... 5 = Most Effective) ** = significant at 0.01 level

Host country subsidiary/partner personnel has been regarded by all the expatriates as being the most effective and qualified to provide the necessary training for effective expatriate performance. This could very well be due to their familiarity with the conditions and environment of the host-country, and hence are in the best position to impart the necessary knowledge and skills of host-country management to the expatriates. In-house/company personnel/headquarter is the second most important in all the groups. The ANOVA results show that there is no significant difference in the means, except in the category of academic professionals. It may be interesting to note that the expatriates for all the five countries viewed the university/academic professionals as being the least effective among the four groups of expatriate training providers.

Conclusions

In the past, studies on expatriation often focused on regions outside Asia, especially on Europe and America. However, as the Asian economies have gradually become important and interesting to foreign investors/MNEs, the relevance of those studies in the context of current business trends needs to be re-assessed. One can not deny the existence of the fundamental differences in historical, socio-cultural and political backgrounds between the East and the West. Research findings in the past pertaining to expatriates working in the west mostly from countries such as the United States and other European countries may not necessarily apply to the rapidly growing number of expatriates working in Asian countries. Further, the recent involvement of MNEs from developed countries in Asia provides an excellent opportunity to re-evaluate the training of expatriates in this region. This study, through focusing on the five groups of expatriates from three continents, may uncover new perspectives and directions in

international human resource development, particularly relating to the critical HRD decisions of design, development and delivery of effective training programs for effective performance in the expatriate assignments in Asia. Empirical findings from this study showed significant differences among the expatriates from different countries on various issues of training and development, which might provide first hand information that could be utilized for making appropriate decisions in that regard. Although this study serves to narrow the research gap on expatriates working in the Asia-Pacific, it is far from being comprehensive and exhaustive. Future research in this area is needed to explore other aspects in many other countries of Asia that have not been studied. More studies on expatriates in Asia are definitely needed since increasing interest is observed for investments in this rapidly growing region of the world. Hopefully, the findings from this study will trigger greater research interest on expatriate management in Asia.

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Development Of A Framework For Emerging Asian MNCs And A Model For Promising Local Enterprises To Migrate Onto The 'MNC Curve': An International HRD Perspective.

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Increasing globalisation creates continuous challenges for corporations. In the new knowledge economy of the 21st century, as corporations surf the 'global wave', human capital will play a key role. This work-in-progress paper looks at the evolution of the global economy, impact of changes brought about by technology, communication and education. It also surveys the different approaches to management development adopted by American, European and Japanese MNCs. The paper aims to propose that if corporations are to survive the 'global wave', a different trajectory is needed – one that allows organizational flexibility, renewal, global integration and national responsiveness.

Keywords: Emerging Asian MNCs, Multinational Management, International HRD

As the world economy gets increasingly interdependent and interconnected, doing business as usual is not enough. Most industries of any significance have to be world-wide in their scope, and no company – no matter how large its home market base – is immune from the effects of the international environment. Jeffrey D Sachs wrote in the Global Competitiveness Report 1998,

"...with all of the ups and downs in specific economies and regions, the trend towards greater integration in the world economy continues unabated. This is especially apparent when we look at the underlying data concerning openness of national economies. As of 1998, every country in the sample has a currency that is essentially convertible for trade purposes...Globalisation is no illusion. It has gripped nearly every major economy of the world. Both trade and financial systems are opening up as never before in modern history. This is not to say that all will go smoothly – as the east Asian financial crisis demonstrates – but rather that the powerful economic, political and technological forces that are prompting the increasing integration of the world economy are continuing unabated."

For multinational and transnational corporations, the coming millennium will very likely begin with either a long list of unresolved issues or hopefully, the full benefit of the lessons learnt from the Asian Economic Crisis and it is imperative that corporations, especially Asian multinationals and promising local enterprises gear up and learn to dance to the new tune.

In Singapore, the Promising Local Enterprise [PLE] program was launched in 1995 by the Singapore Government, to help nurture strong local enterprises to become Asian MNCs. The Singapore Government aims to produce 100 companies (of a total of 300 in the scheme) with revenues of USD50millions by 2005, then groom them eventually into Asian MNCs with turnovers of USD200millions to USD250millions and with significant presence in at least four foreign countries.

However, before a corporation can build and manage an effective integrated network of world-wide operations, it must develop certain strategic and organisational assets. While some countries may offer certain location-specific advantages, the company must have strategic competencies to counteract the disadvantages of its relative unfamiliarity with foreign markets. One key contributing competency is the quality of the company's human capital. It is important that the company has organisational capabilities in order to be able to get better returns from leveraging its strengths internally rather than through external market mechanisms (Dunning, 1981). Thurow (1992) argues that technology is no longer an overriding factor in economic competition between nations because of the ease of capital mobility. National resources are also not as important a factor as they used to be, again because of the accessibility of technology. He argues that the most important factor affecting economic competitiveness is the quality of the workforce. In fact, the 1992 World Investment Report concluded that transnational corporations use ownership-specific advantages, together with the competitive pressures to internalise a wide range of value-adding activities rather than relying on so-called 'arms length' production. These internalisation advantages when combined with the location-specific advantages of host countries, provide a powerful stimulus to growth..

Review of the literature shows that the study of international business had focused on the environmental forces, structures, and institutions that provided the context within which MNC managers had to operate. Most of

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these studies are deeply rooted in Western historical experience. The study of Asian MNCs is a relatively new field, with much to be learned. The focus of this research will be the multinational enterprise management structure and HRD practices, with particular reference to Asian MNCs and promising local enterprises. However, this does not suggest that the important and legitimate perspectives and interests influencing other key factors in the international operating environment will be ignored.

Evolution of the Global Economy

Dunning (1993), categorised the evolution of the global economy into five stages, each distinguished by a different configuration of the competitive strengths and weaknesses of firms, and their strategic response to them, as well as that of the competitive strengths and weaknesses of the Nation States and the strategic response of governments to them. The first stage, from the mid 19th century to the First World War, witnessed a revolution in production and organizational methods and new forms of transport and energy. Stage 2 of the evolution, from 1918 to the outbreak of the Second World War, is characterized by the maturing of both US and the European MNEs and a general move towards the integration of their affiliates into the economies in which they operated. Natural factor endowments together with Government imposed import restrictions remained the main determinants of the location of economic activity. Structural distortions in cross-border markets counteracted the technological and organizational advances of the era and severely hampered international plant specialization and intra-firm trade.

Stage 3, between 1945 and the late 1960s, saw the technological and economic hegemony of the US at its zenith and the international agreements forged at Bretton Woods and GATT were having their most dramatic impact on trade liberalization. As the significance of foreign production and the number of the MNE affiliates grew, the organizational philosophy of MNEs shifted from being mono or ethnocentric to being polycentric, with many companies replacing their international divisions by cross-border functional/product or regional divisions.. This was also a period in which Keynesian economic policies were in full vogue and governments were assuming a more important role in influencing national diamonds of competitive advantage (Porter, 1990). Towards the end of the period, the role of 'created' factor endowments (e.g. entrepreneurship, technology and human capital) was becoming a more important feature of the location attractions of countries, particularly among industrialized developed countries, between which the significance of intra-industry trade was also increasing.

The fourth stage, from the mid-1960s to the mid-1980s, saw an increase in the propensity of MNEs to integrate and control many of their cross-border activities and to take a more geocentric stance towards these activities. The period was also marked by a movement towards regional integration in Europe and, to a lesser extent, in Asia and Latin America. This allowed MNEs in those regions to rationalize their value-added activities and recoup some of the advantages of product and plant specialization and intra-firm trade.

By the mid-1980s, most developing countries were relaxing some of their restrictive policies towards inbound investment that had been a characteristic of the early and mid 1970s. This mainly reflected a shift in their macro-economic policies from import substituting to export led or balance of growth in these economies and/or the better understanding and expertise of governments in negotiating with MNEs. The period was also marked by a growth in alternative forms of international business involvement to that of the fully-owned foreign subsidiary, as well as a more pronounced heterogeneity of these forms across countries, industries and firms.

The fifth and current state of evolution of the global economy is essentially dominated by a series of dramatic changes in the world economic and political scenario. MNEs become increasingly aware of the need to be responsive to the local supply conditions, institutional systems and markets of the countries in which they operate, and how these, in turn, may be used to strengthen their own ownership-specific resources and capabilities. These factors and the response of MNEs to them also affect the configuration of the competitive advantages of nations. By the end of the 1980s, in the most advanced industrial economies, not only were natural factor endowments assuming a less important locational role and engineered factor endowments a more important role, but also the actions of governments, through their willingness and ability to affect the quantity and quality of these endowments and their organization, were assuming a new significance.

These developments cause realignment of both strategies of companies as they seek to remain innovatory and competitive in a global economy, and the macro-organizational strategies of countries as they seek to encourage domestic and foreign firms both to upgrade their indigenous resources and to use these resources more productively. The rise of MNEs from the Third World, the growth of cross-border strategic alliances, the increasing attention paid by governments to competitiveness as a goal in itself and the closer interaction between corporate and regional integration, are all illustrations of these developments.

In the early 1990s, the MNE continues to evolve into a very different sort of institution. It increasingly

assumes the role of an orchestrator of production and transactions within a system of cross-border internal and external relationships. From being mainly a provider of capital, management and technology to its outlying affiliates, each operating more or less independently, and then a coordinator of the way in which resources are used within a closely knit family of affiliates, the decision taking nexus of the MNE in the early 1990s has come to resemble the central nervous system of a much larger group of interdependent, but less formally governed activities aimed primarily at advancing the global competitive strategy and position of the core organization.

The Evolution Of MNCs In North America, Europe And Japan: Strategic Motivations.

Hymer (1976) and Kindleberger (1969) argue that enterprises invest overseas to exploit an "advantage" such as a unique product or process, a special knowledge, or certain management skills. The multinational corporation, according to Hymer (1979), was originally an American phenomenon. Between the end of the Civil War and America's entry into World War I, the United States had no significant benchmarks in the steady multinationalization of Corporate America because of its economic self-sufficiency. World War I changed that perspective. It pushed the larger oil, copper, nitrates, rubber, and aluminium companies into making irreversible commitments to foreign investments to ensure their companies' future. Foreign expansion by the consumer-driven companies such as General Motors, Goodyear, General Electric, and Du Pont was less urgent and therefore less aggressive. All these foreign ventures had the geographic spread to qualify as "MNC". Yet, in terms of corporate management and finances, they were really American companies with "subordinate" foreign branches that acquired their justification because they served some specific objective.

The real impetus to the multinationalization process in the industrial and service sectors developed during the late '50s. Between 1950 and 1965 US direct investment abroad increased nearly fivefold, from $12 billion to $55 billion. By the end of 1980 the total was approximately $220 billion. In addition, the advances in transportation and communication, the introduction of the computer, and massive rebuilding requirements in Europe coincided with the rapid growth of American MNCs. Perhaps more than any other single force, the Common Market stimulated multinationalization and service enterprises.

The reaction of European business was to join the multinational corporate system rather than to challenge it. European firms were already multinational and they gradually became better equipped for multinational operations as a result of mergers, nationalization, and growth, and they began to extend their international operations in other European countries, in underdeveloped countries, and even in the United States. Therefore, the MNC system was no longer an American system but at the very least became a North Atlantic system both in the sense that Europeans joined the MNC ranks and in the sense that American firms became less tied to the United States.

Traditionally, British and European capitalism has practised portfolio investment, loans, and similar forms of capital export. Although Great Britain and other countries did make direct investments in the nineteenth century, these investments were invariably infrastructure investments [utilities, port facilities, and railroads] (Hall ed., 1968). British investment was accompanied by mass migration of labor. Management, capital, and technology have gone as a package to foreign lands in search of labor, markets, and resources. Most of the original investment made by European countries to the USA was of the portfolio variety. Direct investments made in the US manufacturing sector near the end of the nineteenth century included capital from the British textiles, primary metals, and food and beverages, and from the Germans in chemicals, beverages, and electrical equipment.

The Japanese MNC, on the other hand, had a different motivation. The need to guarantee supplies of raw materials, the need to be cost-competitive (the rising wages, labor shortages, and an appreciating currency), and the need to secure access to the world market led Japanese firms to construct an extensive network of exploration and production abroad. Those activities were conducted by leading Japanese trade firms who were already multinational (Hymer, 1979). Many of these ventures do not take the form of the wholly-owned subsidiary or branch plant used by American MNCs. Instead, they frequently involve production sharing, guaranteed demand contracts, technical assistance, and portfolio capital.

Even after World War II, the Japanese continued their policy of not permitting foreign direct investment but of spending liberally for imported licenses of technology (Tsurumi, 1976). Their purchases of technology from abroad were considerable, yet at the same time they spent more than four times that amount on domestic R&D. Within a relatively short period of two decades Japan transformed itself into an aggressive world leader in many industries. The Japanese succeeded in breaking up the "package" of capital, technology, and entrepreneurship which foreign direct investment has most frequently entailed. They didn't need the capital; they got the technology without managerial control by American corporations, and entrepreneurship remained in the hands of the Japanese.

A Comparison Among American, European, and Japanese MNCs.

Although much cross fertilization took place between Americans and Europeans, and also between managers in developed and developing countries, subtle but noticeable differences still exist between the three groups of multinationals under consideration- Americans, Europeans and Japanese. They are different in their investment strategies, reaction to changes in host-government policies, and the selection and training of overseas managers. Scholars such as Nowotny(1964), Miller (1980), Negandhi and Baliga (1979), Negandhi (1980) Merwe (1980), Stening et. al (1980), Matsusaki (1980) have done comparative studies of American, European and Japanese MNCs from different perspectives.

Comparison on the Evaluation of the Performance.

According to Tsai (1997), the US multinationals, in general, seem to be operating with different definitions from those held by either their European or Japanese counterparts. To American managers, the cardinal principle of efficiency was the profitable production of quality goods and services at a price the consumer could afford or was willing to pay. This notion was continually reinforced by the home office, which rewarded the subsidiary on the basis of its annual bottom line performance. Thus, plant productivity, cost of goods purchased, and similar financial indices became the main concerns. The very legitimacy of overseas operations and their subsequent worth was seen in terms of operational efficiency.

In contrast, the Japanese and Europeans measured success or failure not so much in terms of the operational success of failure or in terms of the operational efficiency criteria used by American MNCs, but in terms of system effectiveness, i.e. the degree to which their organization was able to adapt to and cope with the stimuli emanating from the environment. In order to do so they were often willing to sacrifice some short-term operational efficiency. Furthermore, the home office often reinforced the policy of long-term effectiveness by stationing an expatriate manager in one country for substantial periods of time. The manager's role was evaluated not so much in terms of bottom-line profits as in terms of the ability to cultivate and maintain a harmonious interaction with host-government officials and others in the environment. In contrast, most US executives perceived such activities as a "waste of resources", contributing only to a decrease in efficiency and profitability. In fact, US subsidiary managers were rarely asked by the parent organization to cultivate interface and boundary relationships. Also, European and Japanese executives were given enough leeway and freedom to set their own targets in a given country, while US subsidiary executives were programmed by their headquarters to produce, sell, and make profits at certain levels.

Mentality Differences

Another characteristic displayed by US executives was their misguided notion that they were doing the host nations a big favour by their presence (Negandhi, 1979). In contrast, European MNCs, according to Franko's (1976) study, encouraged a highly adaptable attitude. The Japanese multinationals' overall attitude toward host nations was even more conciliatory than that of the Americans and Europeans. Japanese MNCs generally emphasized their role in contributing to the overall welfare of their host and home countries. They seemed to believe that each and every one of them has a national responsibility to secure resources for Japan, to provide opportunities for small manufacturers from Japan to invest overseas, to sell their advanced technology, and to help host nations achieve their own socio-economic objectives. Such a 'collective' orientation, in contrast to the 'individualistic' orientation of the US executive, strongly reflects Japan's national heritage and religious beliefs (Kitagawa, 1976).

Human Capital And International HRD

Harvard Business Review World Leadership Survey (1991) revealed that corporate executives display keen awareness of the importance of human resources in organizations. According to the survey respondents, the most important elements in corporate success are customer service, product quality and work skills. All three factors are heavily dependent upon human capital – the education, training and motivation embodied in people. The increasing importance of human capital, coupled with changes in technology, consumer demand, demographic composition of workforce and in global competition will have a continuous impact on the role of HRD activities. Once considered to be the most stationary factor in production, human capital now flows across national borders as easily as cars, computer chips and corporate boards. In the next century, the world's workforce will become even more mobile, and employers will increasingly reach across borders to find the skills they need (Johnston, 1991). In a global organization, the human resource challenge becomes recruitment, selection, training and development, and supervision planning on a global scale from global sources. Global and cross-cultural training and career-path

planning becomes necessary for managers in the global corporation, regardless of their domestic or international assignments (Rhinesmith, 1991).

In reality, most managers are, however, nearsighted (Ohmae 1989). Too few managers consciously try to develop plans and build organisations as if they saw all key customers equidistant from the corporate centre. Effective transnational operations require a genuine equidistance of perspective and to succeed in the international operating environment of the 1990s and beyond, managers must be able to sense and interpret the complex and dynamic environmental changes; they must be able to develop and integrate the multiple strategic capabilities; and they must be able to build and manage the complicated yet subtle new organisations required to link these sensing and response capabilities, and deliver co-ordinated action on a world-wide basis. According to Bartlett and Ghoshal (1995), there are three core roles and responsibilities that almost always fall to these key managers: world-wide product or business strategist, architect of world-wide asset and resource configuration, and cross-border co-ordinator and controller. They suggest that in the 1990s, the competence of a firm to develop and manage a cross-border network of separate but interrelated value-added activities will be the key factor determining the success in the global competitive environment. Such a competence, they argue, is three-pronged. First, it involves taking full advantage of the economies of scale and scope arising from global integration. Second, it involves a flexibility and proper appreciation of differences in the supply capabilities and consumer needs in different countries. Third, it involves using the experience gained in global and national markets to strengthen the resource base of the firm as a whole. To achieve such a balance between globalization, localization and learning experience, the traditional MNC organizational structure, with its hierarchical pyramid, subsidiaries and world headquarters, will gradually evolve into a more fluid and integrated network to adapt to strategic and competitive imperatives. For multinationals to survive in a dynamic environment, it also has to have in place, a renewal process involving all levels of management – straddling the entire human capital spectrum

Organizations, however, find various aspect of globalization difficult since the international management literature so far does not provide much guidance. With regard to international HRD, Ronen (1989), concluded that the limited quantity and quality of pertinent literature was the biggest obstacle to pursuing the task of identifying the behavorial characteristics, developing the optimal skills and evaluating the HRD techniques for this purpose. Mendenhall and Oddou (1985) concluded that available knowledge of the cognitive dynamics of international assignees' cross cultural adaptation processes is quite limited.

Research has shown that management methods and managerial knowledge are culturally sensitive and are based on the national identity of managers. But there exists a research gap in the field of management development technology. Also, very little research has been done on the design and delivery aspect of international management development programs which consider the national clusters and cultural aspects of managers' backgrounds. One study looked at the perceptions of MNE managers from 32 different countries on various HRD issues related to the transfer of management technology (Osman-Gani, 1991,1993). It identified several country clusters from the response patterns of managers from various countries, and discussed the implications for design and implementation of cross-cultural HRD programs. Evidence suggests that the national context of a firm's operations plays a significant role in shaping organizational practices, irrespective of the national ownership of the company (Brewster, 1995). Sparrow, Schuler, and Jackson (1994) also identified clusters of countries showing how organizations in different parts of the world operationalize human-resource management differently as a result of environmental pressures.

On the other side of the coin, multinational parent companies also exert influence over their subsidiaries by introducing home-country practices into host countries, irrespective of local conditions. This is evident in the work of Hedlund and Aman (1984) who looked at Swedish multinationals, of Tsurumi (1986) who studied Japanese companies, and of Stopford and Turner (1985) who argued that US multinationals introduced US styled personnel practices to Britain via their British subsidiaries. Yet, research examining the failure of multinationals in overseas operations would suggest a need to adapt management practices as opposed to imposing them abroad (Gleave and Oliver, 1990). Olga (1998) revealed considerable support for proposing national context as a key determinant of MNE practice over parent's national origin. His findings do suggest that the role of the national origin of the parent in shaping MNE practice is less important than the literature suggests – at least, in relation to HRD practice.

International Management Development

Internationalisation, therefore, has deeper consequences on the concept of management itself. Deeply rooted "one-best-way thinking" has been shattered by the awareness that there are different and equally effective approaches to management and organisation. Twenty years ago, "good management" was synonymous with the American approach. Decades later, new approaches and challenges have surfaced in the form of the Japanese model, the "German challenge" and the Swedish model. We are still in the process of discovering that there are as

many different approaches to management as there are national cultures. Evans, Laurent and Doz (1989) maintain that each of these nations has discovered and built upon some aspect of the complex reality of management, though often this concern becomes obsessive and pathological. Aharoni (1966) and Carlson (1966) used a clinical methodology to examine the FDI process from a more managerial perspective. Others like Stopford and Wells (1972) and Franko (1976) built on the seminal work of Chandler (1962) defining the archetypical strategies and structures that had allowed MNCs to expand. Several doctoral dissertations (Prahalad 1975; Doz 1976; Bartlett 1979), examined the nature of the management process in MNCs, though these studies centred primarily on American MNCs. Research on European MNCs was conducted by a group of researchers at the Stockholm School of Economics. Over time, this group focused on the nature of headquarters-subsidiary relationship and provided new insights into how world-wide operations were co-ordinated and controlled (Otterbeck (1981); Hedlund (1978,1986). In general, very little research has been done on Asian MNCs.

Porter (1990) popularised the idea that nations have competitive advantanges and stopped short of the key question of why certain nations develop competitive advantage and others do not. Dunning(1993) argued that Porter underestimated the significance of the globalisation of production and markets for the competitive advantage of nations. This is because the increasing interaction between the cross-border value-added activities by multinational enterprises will directly or indirectly impinge upon national competitive advantage. Hofstede, Franke and Bond (1991) work, building upon three comparative studies providing measures of national culture, may shed some light on this issue. Their thesis concluded that differences in cultural values, rather than in material and structural conditions, are ultimate determinants of human organisation and behaviour, and thus of economic growth. Hofstede (1980,1991) undertook the most classic study of cultural differences and identified five dimensions where cultures differ: (a) power distance, (b) uncertainty avoidance, (c) individualism, (d) masculinity and (e) time. Kluckhohn and Strodtbeck (1961) developed a framework of six dimensions to describe the values orientation of a culture as, (a) relation to nature, (b) time orientation, (c) basic human nature, (e) relationships among people and (f) space orientation. Trompenaars (1993) describes national cultural differences using seven dimensions: five are about how people relate to others, the sixth is time orientation and the final, relationship to nature. It is to be noted that in discussing the relation of culture to the study of organisational behavior, organisational theories developed in the West may not apply in Asia because of cultural differences. As the world becomes increasingly better interconnected, the implication for managers is that understanding culture is becoming a critical management skill.

Cultural Traditions In Management Development

This paper will proceed to review how companies in different cultures actually manage their executive development as they position themselves for the global transnational environment. According to Evans, Lank and Farquhar (1989), there is no established one best way of tackling management development. Focusing on the development of those persons with high potential, they labelled these – the Japanese model – "elite cohort approach", the Latin model – "elite political approach", the Germanic model – "functional approach" and the Anglo-Dutch MNC model – "managed development approach".

Singapore Companies - Strategies For Future Competitiveness

Singapore was ranked first in the 1998 World Economic Forum Global Competitiveness Report, followed by Hong Kong and the United States. The overall Competitiveness Index is built upon the average of eight factors: Openness, Government, Finance, Infrastructure, Technology, Management, Labor and Institutions. The Committee on Singapore's Competitiveness (CSC) was formed in May 1997 to assess Singapore's competitiveness over the next decade. Among its strategic recommendations are proposals for Singapore companies to leverage on human capital and achieve the status of world class corporations.

Research Methodology

Using the models conceptualised by Bartlett and Ghoshal for transnational corporation renewal, and Osman-Gani for transfer of management technology, as platforms, this exploratory study will seek to find a different trajectory for emerging Asian MNCs and promising local enterprises to leapfrog into the 'next lap'. The study will be conducted using the following approach:

- Interviews with executives of selected MNCs (Japanese, Korean and Singaporean) and a group of promising local enterprises (PLEs).
- Survey of PLEs and MNCs in Singapore, Japan and Korea.
- Focus group discussions with Chief Executive Officers of Promising Local Enterprises.

- Case studies of a sample of MNCs from North America, Europe and Japan.

Research Questions

This research attempts to address the following questions:

1. What HRD strategies are being followed by Western MNCs (American and European) in their development path?
2. What are the nature of similarities and differences in HRD strategies adopted by Western and Asian MNCs?
3. What are the social and cultural implications of the similarities and differences?
4. What are the strategic motivations for emerging Asian MNCs and promising local enterprises to aspire to go international?
5. How can Promising Local Enterprises achieve the synergistic effects of the combination of the two models identified under the research methodology?
6. Can Promising Local Enterprises ride on the Government's policy directions?
7. What HRD strategies should be followed by Promising Local Enterprises to become emerging Asian MNCs?
8. What HRD strategies should be followed in developing a cadre of global managers?

Expected Results

It is hoped that the intensive literature review, case studies, interviews and surveys, while bearing answers to the research questions raised above, will also reveal the similarities and differences between Western and Asian MNCs. The uniqueness of the Asian corporations, the author believes, will also stand out. It is also expected that, given the speed of change in the international business environment and the impetus provided by the Singapore Government, the local promising enterprises will have to take a different trajectory. Following the traditional growth patterns of the traditional MNCs will simply not be adequate. In the process, we will develop the 'migration path' for emerging Asian MNCs and Singapore PLEs.

Contribution To New Knowledge In HRD

This research aims to enhance the existing general pool of knowledge on HRD in MNC management by:

- Adding the Asian framework for emerging MNCs and in relation to the small and medium enterprises.
- Develop a "migration framework" for promising local enterprises to go on the MNC curve.
- Identifying 'renewal' framework for companies to survive in the new economy.
- Highlighting new insights into differences of MNC management between East and West.
- Generating further research questions on developing truly global ('stateless') managers.

Note

For the purpose of this research, the words international, multinational, MNC, multinational enterprise and transnational corporations have been used interchangeably.

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The Framework and Practices of Cross-Cultural Training of Taiwanese Corporations

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This paper reports the findings of a study that investigated the practices of cross-cultural training of high-technology corporations in Taiwan. The results showed that nearly one-third of the corporations had cross-cultural training programs. The training methods, the contents of the program, and the reasons for them to implement the programs or not were also discussed in the study.

Keywords: Cross Cultural Training Technology Training

With "the Taiwan Experience - the Economic Miracle", the amount of outward investment by Taiwanese corporations is tripled what was five years ago. The environment Taiwanese corporations now faced is one in which they must deal with not only single culture but multiple cultures. Research has shown that management style, learning style and value systems are different in different cultures. Both HRD practitioners and researchers must find a new way to help organizations operate in a global context. Cross-cultural training is one of the methods. As the economic power of Chinese Taipei grew over the last decade, more Chinese enterprises made direct investments or set up subsidiaries in other countries. To help the expatriate adapt the other culture, and also let the foreign employees understand the corporate culture, cross cultural training is just getting the attention in the field of HRD both in the industries and the academy.

The purpose of this study is to investigate the practices of cross-cultural training in Taiwanese corporations and to develop or justify a model of cross-cultural training. Three research questions were answered in the study:

1. What is the content of cross-cultural training in Taiwanese corporations?
2. What are the problems that occurred in the cross-cultural training programs?
3. What are the reasons that not implementing cross-cultural training?

Methodology

A questionnaire was used to determine what practices of cross-cultural training were carried out in Taiwanese corporations. Three parts of questions - the practices of cross cultural training, the reasons for not implementing cross cultural training, and the demographic information were asked in the questionnaire. The sample was concentrate on high-technology corporations, since a high percentage of Taiwanese multinational corporations are in the electronic industry.

Ninety-nine Taiwanese multinational companies in high technology industry were selected to conduct the survey from the following criteria:

1. 214 high-technology companies were selected from the Top 1000 corporations published by Taiwan's "Common Wealth" in June 1997.
2. 87 of the 214 selected companies had registered the outward investment in the Industrial Development and Investment Center of the Ministry of Economic Affairs.
3. After double-checked by phone with the 214 companies, 12 companies also had oversea subsidiaries that were not shown on the official record.

The survey was conducted from February 1998 to April 1998 in Taiwan. The questionnaires were distributed to the HR managers in the headquarters of the selected corporations. The over all response rate was

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64.65%. Out of the 65 returned questionnaires, 7 did not have completed demographic data. After excluding these incomplete questionnaires, the response rate was 57.6%.

Findings

The results of the expatriate duration, length of training, training methods, contents of the program, problems with implementing cross-cultural training program, and the reasons for not implementing cross-cultural training are described in the following sections.

Table 1 shows the expatriate duration. The results show that 64.7% of the companies sent their employees overseas more than 1 year. The research also found that about 31.6% of the electronic companies have overseas subsidiaries has cross-cultural training program

Table 1. Expatriate duration

Expatriate duration	Percentage(%)
1-month & below	11.8
2-month to 1-year	23.5
1~2 years	52.9
2~3 years	5.9
3 years & above	5.9

Table 2 shows the length of the cross-cultural training program. Most of the cross-cultural training programs are on-day training. 17.6% of the companies offers 2-day training while 23.5% of the companies has 3-day training programs.

Table 2. Length of training

Length of training (day)	Percentage(%)
1	52.9
2	17.6
3	23.5
4	0
5	0
6 and above	5.9

The degrees of expected interaction and similarity between the native and host cultures determined the cross-cultural training method (Tung, 1981; Mendenhall, Dunbar, and Oddou, 1987). Table 3 shows the cross-cultural training methods. Area briefings, books, lectures, and films are the four most often used training methods. The methods are information giving approach or didactic-information training (Mendenhall, Dunbar, and Oddou, 1987; Ronen, 1989). Case studies, cultural assimilators, and role plays belong to affective approach. The approach is great useful to the expatriate who want to stay in the foreign country for more than 2 months (Mendenhall, Dunbar, and Oddou, 1987). If the individual is going to a different host culture and the expected degree of interaction is high, the immersion approach is a suitable training method. In the study, sensitivity training and simulations belong to the immersion approach. From the results, we know that most of the corporations used the information giving approach to train their expatriates. To help them adapt to the different culture easily, cross-culture skills might be the next considerations for the corporations.

Intercultural business skills, cultural shock management, life-style adjustment, host-country daily living issues, local customs and etiquette, area studies, and language learning strategies topics are useful in the cultural adjustment process (Blocklyn, 1989 ; Black,Gregersen, and Mendenhall, 1992; Briscoe, 1995; Harris and Moran, 1996). Table 4 shows the content of cross-cultural training course. The first five courses includes area studies, cultural awareness, business related skills, language ability, and technical competence. It quite covered the content that mentioned from the previous researches. Since Families' adjustments and supports is one of the most important

factors for the successful expatriation (Black and Gregersen, 1991; Harris, 1989; Tung, 1987), the course for family adjustment should get attention in the HR department.

Table 3. Cross-cultural training methods

Training methods	Percentage(%)
Area Briefings	23
Books	16
Lectures	15
Films	11
Case Studies	13
Culture Assimilators	8
Sensitivity Training	5
Role Plays	2
Simulations	2
Others	5

Table 4. Content of cross-cultural training course

Content of the courses	Percentage(%)
Area studies	94.1
Cultural awareness	76.5
Business related skill	70.6
Language ability	70.6
Technical competence	64.7
Cross-culture communication	58.8
International manner	52.9
Stress management	52.9
A sense for politics	41.2
Field trip	41.2
Family orientation	17.6

Table 5 shows the problems with implementing cross-culture training. The first four difficulties that the companies running the cross cultural training programs are: the trainers who have significant international background and experience are insufficiency; lack of time because of the immediacy or the need for the manager overseas; not enough trainees to have the class; training programs are easy to be devised.

Table 5. Problems with implementing cross-cultural training

Problems	Percentage(%)
Lack of trainers who have significant international background and experience.	26.2
Lack of time because of the immediacy of the need for the manager overseas.	23.8
Small number of expatriates, insufficient to form a class.	14.3
Training programs are not easy to be devised.	11.9
There are doubts about the need for such specialized.	9.5
The belief that cross-cultural training programs are not effective.	9.5
The shortage of budget expenditure for cross-cultural training.	4.8

Table 6 shows the reasons for not implementing cross-cultural training. The first four reasons for the companies that didn't have the cross cultural training programs are: the trend towards employment of local nationals; the

temporary nature of many such assignments; there are doubts about the need for such specialized, and there is a belief that the competencies of expatriates are enough to complete the assignments.

Table 6. Reasons for not implementing cross-cultural training

Reasons for not implementing	Percentage(%)
The trend towards employment of local nationals.	16.85
The temporary nature of many such assignments.	13.48
There are doubts about the need for such specialized.	13.48
There is a belief that the competencies of expatriates are enough to complete the assignments.	13.48
The dimensions needed for successful acculturation are not well enough to known to devise sound training programs	10.11
Lack of time because of the immediacy of the need for the manager overseas.	8.99
The shortage of budget expenditure for cross-cultural training.	6.74
The trainers who have significant international background and experience are insufficiency.	5.62
The belief that cross-cultural training programs are not effective.	2.25
Others	8.99

Conclusions

The results show that nearly one third of the corporations offered cross-cultural training program to the expatriate. The length of training for 93.7% of the corporations is less than 3 days. Most of the training methods they used belong to the information giving approach. It seems that the approach did not adjust by the length of stay. Affective and Immersion approaches should be used to increase the degrees of integration. Doubts about the need for cross-cultural training programs are one of the major reasons for the corporations that did not offer the programs. From the previous research (Tung, 1982; Conway, 1984), we know that the cross-cultural training reduced that rate of failure expatriation. Hopefully, 35.9% of the corporations that are not implementing cross-cultural training will consider such training in the future. As 76.9% of the respondents thought cross-cultural training is a worthy investment, the cross-cultural training will get much more attention in Taiwan.

The empirical study of cross-cultural training in Taiwan is in its infancy. Few reported studies offer recommendations. Existing research consists of descriptions of the training program or reports on the program from the expatriate's point of view. Cross-cultural training should be highly valued as a means of making the enterprise increase its competitiveness in the global market.

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Knowledge Management and Knowledge Dissemination

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The importance of knowledge in companies has increased in the last ten years. Knowledge seems to have become more important than labour, capital and raw materials. It is true that in many western countries, but also in Asia, societies are growing into service oriented labour markets. Many authors perceive a huge growth in service sectors. Many experts see a world in which people exist by the exchange of information and knowledge, in which knowledge is not only a tool to work with, but also a sellable product. This fact as such is not new; what is new is the fact that for so many people it will become a new job : the knowledge worker. In two case studies an exploration takes place of strategies companies use in sharing and disseminating knowledge and expertise between employees.

Keywords Knowledge Management, Learning Organization, Technology

Introduction

The demand of knowledge intensive services is growing so rapidly that companies are producing more and more services instead of goods. Manual and craft sectors are going to change into intellectual work: from handwork to brain work and the life cycle of products is going to be shorter. Designing and developing intelligent products and processes are becoming more important, also because of cost- benefit ratios. Organisations must act and be pro-active as fast as possible to changing demands and technological growth (Sogtoen, 1996). Knowledge management, therefore, is a consequence of a changing paradigm - from an industrialised toward an information based economy. Some writers, like Drucker (1993), see a three stage model in which the importance and relevance of knowledge is increasing:

- the industrial revolution in which application of knowledge leads to new products and tools; concentrating of this type of work became visible in big factories;
- production revolution in which knowledge is connected to work; scientific management(Taylor) is the scientific expression of this leading to more efficiency and productivity;
- The third phase - we are in the middle of this - is marked by the connection of knowledge to knowledge. This phase is characterised by the focused use of knowledge and expertise, systematic and targeted to solve problems.

Human resource development in companies is dependent of this kind of developments. What will be the needs for trainees and employees in terms of knowledge and expertise? What are the new job requirements in terms of handling these new skills? How should a company profit from this? Before analysing two cases from business and industry introducing strategies for knowledge management some important concepts have to be defined: data, information, knowledge and expertise, because these concepts play an essential role.

Data, Information, Knowledge & Expertise

It is not easy to define the four concepts. For the sake of a clear understanding we will not now go into a semantic analysis or a hermeneutic analysis of all possible meanings. We simply define three levels :

- data: simple registrations and observations, without special meaning (i.e. a telephone book);
- information is giving meaning to data
- knowledge: information that has been taken up in a frame of understanding and will be handled by the user.

The concepts of expertise and competence are used in this text as interchangeable with knowledge, while the cognition and skills needed to carry out a certain task within a company can be interpreted as the knowledge structure. Procedural and declarative knowledge is needed to solve problems and are based also on factual and

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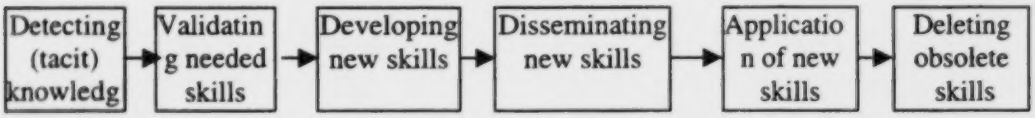
conceptual knowledge. Competence in this context means the ability to use knowledge, especially when related to the use of systems (i.e. computer programs, manuals, information systems). Competence is connecting people and systems: together both people and systems are competence (Sprenger, 1995). Added value, as a consequence of connecting people to systems, is the output of competence and conditioned by the worker. Electronic Performance Support Systems (EPSS) is one of the possible operationalisations of competence (Bastiaens, 1997). What then is knowledge management?

Knowledge or Expertise Management

Basically, knowledge management is the process of making explicit the tacit knowledge of employees to optimise the effectiveness of the knowledge chain in a company. Knowledge management is also not focused on one person; the target is the organisation, optimising the performance of the organisation at three levels: individual, process, and organisation (Rummler & Brache, 1995).

In all of these we find opportunities for interface management, which can be defined as knowledge management - detecting existing knowledge, validating the necessary knowledge and skills, developing new knowledge, disseminating, applying and deleting (old and obsolete) knowledge.

Figure 1: The knowledge chain (Weggeman & Boekhof, 1995)



Knowledge management, according to Weggeman & Boekhof (1995), creates a more intelligent organisation, competent and very conscious of expertise and critical issues. Knowledge management (KM) is essential for all parts of the company: for Human Resource Development and Management, the organisation of knowledge, the application of knowledge, barriers to and opportunities for using knowledge (Wiig, 1993). Human Resource Development (HRD) and Human Resource Management (HRM) are usually departments using a set of interventions to unleash human competence or to guide the organisation to better performance. Different sets of instruments can be used for this: knowledge technology and knowledge creation (Van der Toorn, 1996).

Knowledge Technology

This type of technology is focused on the use and availability of knowledge and is related to taxonomies and the detection of available knowledge and their dissemination and use. To see whether knowledge can be used, it is important to know where and how knowledge has been stored. In analysing stored knowledge it is possible to find out where the knowledge is and who is working with it. Different types of storage of information and knowledge can be distinguished:

- knowledge in people (human knowledge): difficult to externalise and bound to human beings;
- mechanised knowledge in machines and apparatus (hardware), useable but restricted knowledge;
- knowledge in documents: books, manuals, and guidelines, job aids, etc. This type of knowledge can be found easily, but is not used on a daily basis;
- automated knowledge in electronic (support) systems; normally containing information and knowledge for diagnosis, design, therapy and planning. These systems normally function as decision oriented systems or management systems. (Boersma, 1993; Sprenger, 1995; Van der Zee, 1992).

Managing the interaction of the four types is a kind of knowledge management in an organisation. If a manager is willing to change one of the parts, it will have an effect on the other ones.
The storage of knowledge in those different parts of the system seems to be dependent of the type of knowledge. Many organisations have the feeling that knowledge really is a part of the organisation, when it has been documented.

Nonaka (1991) and Nonaka & Takeuchi (1995) introduced the concepts of "explicit and tacit knowledge". Explicit knowledge is formal, systematic knowledge, which can be communicated through languages and can be documented in procedures, product specifications and scientific and technological principles.

Implicit knowledge, however, is knowledge based on experiences. It is subjective, not always and easy to explain in formal language, rooted in actions and commitment of people in a certain context. This type of knowledge has two components: a technical and a cognitive component. The technical one is called "know -how" or "Spitzengefühl" (an intuitive kind of knowledge); the cognitive component consist of mental models, beliefs and perspectives. It is an attitude and an implicit way of looking at reality. How can we grasp the implicit knowledge or make the hidden knowledge visible? Different techniques exist like case base reasoning, task analysis, critical incident technique, and adoption and knowledge acquisition techniques. All of them are time consuming and none of them will ever lead to a fully understandable and complete documentation of all the hidden knowledge. Therefore scientists are looking for modes of dissemination within an organisation, using strategies to disseminate knowledge. Sadler & Miller (1993) name four strategies:

1. Dissemination of knowledge through co-operation in teams and projects;
2. Extracting knowledge from people, documenting and storing the knowledge in archives and files;
3. Institutionalising knowledge by using a machine bureaucracy;
4. Creating material and social exit barriers (working climate, rewarding systems).

Implicit knowledge might be understood better through informal communication. Classical forms of on- the -job learning use the modelling principle through which a tutee observes the tutor in solving problems, picks up the key problem solving skills, the sequence, the tools, and the contextual sense and feeling of craftsmanship and expertise. The (body) language and the level of communication are thus very important. Meaningful communication between expert and novice, between expert systems and users, between tutor and tutee, between master and apprentice, are based on mutual understanding both verbal and non verbal.

Knowledge Creation or Knowledge Generation

Part of the knowledge diffusion problem is connected to knowledge use. Using knowledge in a context often means moulding the knowledge and generating new insights on the basis of new experiences, through interdisciplinary co-operation, problem solving capacity, entrepreneurial behaviour and co-operation.
Diffusion of knowledge is often more diverse and linear, whilst knowledge generation is circular and complex. This process can take place between people, machines, systems, and documents.
According to Sprenger (1995) knowledge generation can take place in different patterns:

- Application: using standards problems and routines
- Adaptation; optimising existing procedures for problem solving
- Exploring and discovery; developing new techniques and problem solving procedures, (sometimes leading to new patents).

Besides the use of knowledge, the creation of knowledge is related to added value and growth. Knowledge creation is connected to getting new knowledge and development through reconstruction of existing perspectives and assumptions (Nonaka, 1991). Nonaka gives the example of designing a new car (the Honda Civic) as a solution for people in big cities. It is a small car, very flexible, very mobile, with the largest volume (as a consequence of the "egg form"), but very comfortable.

At that time, it was a revolutionary concept, which was later imitated by many carmakers. This process was related to designing a new product, but Nonaka uses the example to show that four basic processes took place:

Socialisation: through which tacit knowledge is transferred into tacit knowledge (norms, values, attitudes) by using observations, language, imitation or exercises.

Externalisation: through which tacit knowledge is transformed into explicit knowledge in using images or metaphors

Internalisation: by which explicit knowledge is transformed into tacit knowledge. This is the more traditional type of learning processes (see the work of Piaget);

Combination: the exchange of explicit knowledge; exchanging existing knowledge.

Figure 2: Knowledge creation strategies according to Nonaka (1991)

from\ to	**Tacit knowledge**	**Explicit knowledge**
Tacit knowledge	Socialisation	Externalisation
Explicit knowledge	Internalisation	Combination

However insightful this matrix may be, there is a long way to go to build an HRD and HRM system in which these four strategies, in combination with the storage of information, can be used effectively to create a high performance organisation. The role of knowledge management is mostly connected to the explicit kinds of information and knowledge exchange. In the case of experts, some companies have tried to track down the expertise and capture it for the benefits of the companies, especially in companies where employability of older workers is a real problem. Some experiments took place in the Netherlands to keep and save the tacit experiences, skills and process knowledge in, for instance, the service sector (for example the very efficient problem solving skills and colour mixing skills in the textile industry.

Another motive is related to cost saving. On the job training is often based on cost saving arguments (Van der Klink, 1997; Jacobs, 1995). Using on- the- job training as a training strategy, employees have to learn by observation, by learning by doing, on an individual basis. Keeping people away from off- the- job training does save a lot of out- of- pocket costs. But does it deliver better internalised knowledge and competence? And, does it lead to return on investments and to transfer of knowledge? (Phillips, 1995; Gielen, 1995).

Task complexity can be the prime motive in seeing whether the Nonaka strategies can be used effectively. For easy and routine kinds of tasks it is difficult to recommend complicated strategies. Informal learning and acquiring implicit knowledge is quite easy and it is relatively simple to observe how people act (Bastiaens, 1997). Complex tasks, however, demand integrated use of knowledge. In these cases, hidden or implicit knowledge, can play a big role in reaching a degree of competence.

Organising and designing a working environment as a learning environment can stimulate the creation of new knowledge in which implicit or hidden knowledge can grow. The ideas of the learning organisation (Senge, 1990; Watkins & Marsick, 1991) and also experiments with the 'Leittextmethod' in Germany and the Petraproject with Siemens, make clear that new pathways of learning and working, that new border crossings (Engeström, 1994) will take place, in which people will construct new knowledge and performance through co-operation, communication and assessment (Barnes & Todd, 1977).

Not every employee might be capable of understanding implicit knowledge as not every student is capable of understanding in a very explicit way the formal knowledge transmission. The way knowledge has been codified, the way knowledge is accessible, the characteristics of the employee as a learner, inventor, communicator and user of knowledge, are very important factors in understanding the processes of organising knowledge management in organisations.

In the next section, two cases will be described in which companies have designed procedures and instruments for knowledge management. It will be clear from the information that follows that these cases are starting in a zero phase.

The research questions that we are interested in are:

a) What is the motive of the company to go into knowledge management
b) What type of knowledge management does take place?
c) What are the effects of introducing knowledge management?

Case 1: Designing a Tool for Knowledge Management (Dutch Telecom)

Dutch Telecom decided to set up a study in 1992 to develop a tool for expertise management. The concept of expertise is based on a combination of knowledge, attitude and skills. Having expertise available at the right moment, at the right place, is a precondition for Telecom to carry out services. This is a requirement for existing, as well as for new tasks and services. Using expertise is one of the ways to optimise performance of the organisation (Hoekstra, 1995, p. 4). To find the expertise and to manage the expertise can be an asset to the organisation.

Benchmarking procedures can help to find out whether expertise management will lead to a better performance, when compared with competitors. Managing expertise will therefore be focused on:

- defining expertise per task and per division
- describing the importance of a task and service
- what expertise can be found and where
- who are the best carriers for expertise
- what is the gap between necessary needed and existing expertise
- what are the best solutions for this problem?

The main task for Dutch Telecom is to design a tool for detecting expertise. For such an instrument, requirements or specifications should be formulated: functional specifications, operational specifications, frame factors and requirements, and design restrictions. Well, it is clear that

- the tool must fit with the goal of expertise management.
- the tool must be generic in the sense that all divisions within Dutch Telecom can use it.
- there must be a tool that can be customised to the setting.
- the tool should be transferable to HRD officers within Telecom
- the tool should be user friendly and transparent, consistent, not complex.
- the interdependence of stages in finding expertise should be restricted
- the tool must fit with the management style of Dutch Telecom
- the tool has to be ready within 6 months

To set up a tool a case was chosen within Telecom - a satellite station in the Northern part of the Netherlands. This station is the largest satellite station in Europe and connects all the communications all over the world (telephone, tv-signals, ship communication, airline communication). It is a relatively small size case because of the limited number of 40 people working there: mainly technicians for the operation and the maintenance of the satellite station. It has to function 24 hours a day, 7 days per week. There are five business units, covering different parts of the market e.g.consumermarket, business, network, international telecom, and telematic systems. The satellite station is part of International Telecom.

Within the station different groups are working on different tasks. It was decided by the manager to study a special group of people who were responsible for the maintenance of the transmission group. This group is a merger from two older ones: a service and maintenance analogue group, and a digital group. Both groups have experiences with different systems but the new tasks will be the responsibility of the whole group (analogue and digital). Administrative tasks are also part of the responsibility. Monitoring the satellite and transmission services is the main task to carry out.

Within the study of expertise detection the problem has to be defined. In the satellite station 4 monitoring groups are available. The monitoring service is organised in such a way that a person has to be available 1 week out of four. In the near future every employee should take part in all the systems available. The manager is planning a system in which everybody can carry out a service once in eight weeks. The conclusion is that every employee is capable of handling all the systems. It is now necessary to know which expertise is available and how the new expertise can be learned.

In the old situation all the expertise of all the systems is stored in one or two employees. This is a very vulnerable situation and reason to change over to a fully equipped staff with expertise. How can the staff move from a 1:4 toward a 1:8 monitoring service?

What are the problems in detecting expertise?

- What is the level of expertise needed for the monitor function? Is the employee capable of solving all problems, in which case high expertise is required. The alternative would be that the safeguard person only needs to understand how to keep the system active, for instance in using bypasses.
- There is no insight in the diagnostics, no records of breakdowns and there is no systematic log file. Information is handed over informally sometimes.

There is no clear concept of and understanding of what is exactly needed.

After a presentation of the preliminary findings the manager has taken the decision not to take up all the systems for monitoring in the study, but just one. This was problem solving by piece meal engineering: take just one function of the system: Intermediate Data Rate (IDR)(an analogue system).

To have a full insight in the type of work of maintenance and service of IDR, all workers have been interviewed. Nobody was fully informed, nobody had an overview. In gathering all the pieces together and trying to talk to former managers of the division, a picture of five functions became visible:

a) constructing connections
b) testing connections
c) maintenance
d) alarms
e) documentation

All these functions have to be done according to technical rules and specifications. One of the assumptions of the researcher was that all the information could be collected and documented to make it available for all, but very soon, this picture was broken down:

- Sometime it is not only the yet incapability of workers to formulate precisely, but also mistrust. Losing expertise means losing power. This might lead to re-engineering of tasks and clusters of tasks.
- The effect is uncertainty and unwillingness to change;
- Using flow charts proved to be an effective means in mapping the task, functions and chains of decision making.
- On the basis of these cognitive maps the knowledge, skills and attitudes could be detected.

For this type of case it is important to know what the real reasons are and what the best tools and techniques are to detect the adequate skills (cognitions, attitudes and psycho motor skills).

These skills will be used for figuring out the gap between demanded and offered skills in using a questionnaire for self-assessment of needs. But even this instrument proved to be a threat to the employees. Just 50% of the respondents of this department (n= 16) responded. Interviewing might have been a better instrument to use. However, there was some response on different functions:

- Maintenance seems to be not applicable
- Constructing connections is important to four persons
- Testing connections is an average need for the total group
- Alarms and documentation are functions not being covered and mastered by the group

While all the employees have to work with all the functions, just 50% of the group is capable doing so in just two functions. So how is the learning gap to be bridged? Teamwork, transmission by colleges, reflection in teams after work, is the means proposed by the management. From interviews, however, it is known that the members of the IDR team do not co-operate. The expertise is exists, but will not be transferred. Not even reflection takes place. Evaluation of his or her job is up to each member of the team.

Working in steps toward a model of gathering insight in expertise was the main target of this case study. But at the same time it was discovered incrementally, that it is not easy to download the experiences and expertise from people for the benefit of all.

In the end the real question proved to be: "Who is going to serve as the maintenance agent at the weekend?" So, serving the targets of the company to have fully trained and highly expertise people to run a satellite station did not fit with the family intentions to spend the weekend outside the satellite station.

Knowledge management is not just a matter of finding expertise and allocating people on the basis of this. Work is also a culture, and free time is part of human life. Not analysing this potential conflict, lead to a naïve procedure for detecting skills. So, it is communication between people, managers and employees that count.

Case 2: Designing a Knowledge Bank for Knowledge Dissemination

The ING bank in which this study took place, is a merger of three former institutions: the Postbank, the NMBank (specialised in Small and Medium Enterprise Financing) and National Nederlanden (NN), an international insurance company. The cultures and tasks of these three institutions are quite different. The mergers are meant to grow and to maximise new opportunities as a consequence of co-operation.

All the institutions did have an HRD department, but these were brought together in one department for the whole company. HRD is part of HRM. Every branch, however, can preserve their own educational division for standard training. The HRD department has to build up a new image of customised training and advice, in stead of being the provider of standard courses.

In order to be a customer driven organisation, as well as a good interface between the different training departments, the HRD manager takes the decision to design and test a tool for saving expertise and to raise the accessibility of information for all by designing a knowledge bank. In using the System Approach Model of Kaufman (1979) there is some feeling that a workable knowledge bank might be the output. The Kaufman model consists of five steps:

- identify the problem
- determine solutions and alternatives
- select the best strategy
- implement the solution
- evaluate the effect

Based on information models, prototyping principles and reasoning processes not so much the needs of the employees were taken as the guiding principles, but essential organisational activities, functions and objects (Visscher, 1994; Sogtoen, 1996). In the process of prototyping an information bank, however, the user can be interactive and evaluative and have impact in the evolution of the knowledge bank. How meaningful this point of view might be the communication strategies and policies of HRM and HRD did not allow passing by the needs of the clients. Employees therefor had to be interviewed about their activities and computer needs. On the basis of this information a design of a knowledge bank should be made even when the analysis of existing systems of knowledge exchange in different organisations can help to a better understanding of the use and functionality of these concepts. The consequence of this is that a survey should be organised for all HRD professionals (n=59) to let them express their needs in relation to a knowledge bank

Results[1]

The questionnaire was set up to find information about the needs of HRD professionals in knowledge management by using a knowledge bank. Based on this questionnaire 39 responses were collected (66%) of the HRD professionals. On the basis of the response it was found that carrying out training is the most frequent and most important activity, as well as organising meetings, developing course materials, interface management, counselling, and policy studies. Undertaking evaluation research and self study (reading of professional literature) and coaching and guiding of trainees do not score highly.

Respondents agree that the proposed knowledge bank could help to *organise the information* chain in the organisation. Having an overview of all the available course material in all departments of the company could help to prevent reinventing the wheel. Such a knowledge bank could also help *to generate new ideas about course design*, tools, tips, and tricks, as well as good teaching examples.

For counselling and giving advice to employees for example about *job rotation, career planning*, the knowledge bank can also play an important role. Keeping people up to date on the training market was not identified as a special need.

In general, HRD professionals asked for a knowledge bank for direct problem solving for training professionals; that is offering and developing training.

Tabulating four functions could indicate the functionality of the bank; printing, searching people, mailbox, and communication tools. Printing seems to be most important. Also having a mailbox, which can be used for remarks, questions tips. Other functions like communication and searches were not perceived as essential, for the time being.

The conclusion is that the knowledge bank as a prototype needs to address questions and problems related to advice, information, and developing course materials.

All kinds of technical questions can be raised about the functionality and accessibility of the proposed bank. Important are the reliability of data and the validity of information. For the understanding of this case here it is enough to know that these conditions have to be tested. (See Sogtoen, 1996) in using a reference strategy.

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[1] For an exhaustive description of the methodology of the study see K. Sogtoen (1995). Op weg naar kennismanagement. Enschede: Universiteit Twente (doctoraal studie toegepaste onderwijskunde).

The Reference Strategy

This strategy is used to find other systems with the same targets in the Netherlands. Different systems do exist, externally and internally in companies. Four systems are compared and tested, especially to see whether the searching strategies are efficient and practical. (Sogtoen, 1996, p. 74-75). One of the systems has been chosen as a tool, based on its functionality for searching, the type of interfaces and connections, browsing information, printing options, password protection, operating system, costs, and experience with the system.

The last step was to codify all the educational and training material of the three institutions for incorporating into the knowledge system.

Effects?

Does a knowledge bank work and does it help to disseminate and exchange information? After a pilot test to see whether the bank can be used for a field-test, the following results came out: The user did not have time to test the system on the job, for which it was designed! From a response group of 106 only 15 HRD professionals reflected. Even this group felt down to about 8 people telling almost nothing. In a discussion after the test the following perceptions and conclusions emerged:

- looking for information is a time consuming process, often connected to serendipity
- there is a strong need for an overview of all the course materials within the company; not every professional is willing to put his/her course materials in the bank;
- there is a need to have an overview of experts in the company, to contact them, call them and have their advice;
- there is a need for the course offerings of a select set of external training providers; these are not in the system yet;
- protecting the copyrights of designers is important;
- the need for one standard is not apparent; every division has its own needs that have to be covered.

Knowledge Management and Dissemination: Some Conclusions

Knowledge and expertise are important tools in organisations today. Not only people carry knowledge. Knowledge can be stored in different forms and formats. But people want to be informed, will transform information into knowledge and will communicate this knowledge for the sake of themselves, the processes they serve, and the company. But identity and copyrights must be protected, information must be valid, and norms an values of people and organisations must also be protected.

Organisational climates and cultures could hinder the exchange of information and the quality of communication. Both cases show that searching for solutions and designing tools is not an easy path. It is a kind of learning to understand processes, people and their motives, and to break down barriers in communication structures. If we take the four processes of Nonaka as key strategies toward an information and learning society, then we might tentatively conclude on the basis of these two case studies, that we are on the tip of the iceberg of tacit knowledge. We need a better understanding of social and power structures. It is not so much the design of high tech systems, but the realisation and implementation of high touch systems in which people trust to share and disseminate expertise. We need informal places like coffee corners and social places to communicate and to learn to open social structures. Internalisation and institutionalisation of explicit knowledge will go on, just to keep us going in a world of routine and standards.

It may be that Electronic Performance Support Systems (EPSS) and the informal way of using virtual learning environments, can help us, to overcome prejudice, power and pride, because of a lost weekend or a misguided feeling of secret genius training solutions.

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A Theory of Knowledge Management

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Knowledge is now recognized as an organization's most valuable asset. Leading organizations have developed systems to leverage the value of knowledge to meet their objectives. Because knowledge is a complex and intangible asset that cannot be managed like other resources, organizations that do not systematically examine the cultural and technical dimensions of knowledge management experience difficulties with this task. These organizations develop information systems that are not grounded in a sound conceptual framework, in part, because they have no framework for knowledge management. This paper develops such a framework using Dubin's methodology for theory building. Drawing on existing theory and recent empirical studies of this issue, a theory of knowledge management is developed. Implications for further study of this issue are proposed.

Keywords: Knowledge Management, Theory Building, Intellectual Capital

A theory that purports to advance the understanding of how knowledge is managed in organizations must draw from a broad theoretical base because the phenomenon the theory attempts to explain, knowledge management, is itself a pervasive concept that effects every aspect of how an organization functions. Knowledge management deals with knowledge as a vital, yet intangible asset that warrants at least the level of attention given to other valuable resources. Organizations cannot afford to take a passive stance toward knowledge management in the hopes that people are acquiring and using knowledge, and that sources of knowledge are known and accessed throughout the organization. Instead, the theoretical and empirical work cited here support a bold, proactive strategy for developing and managing knowledge. Organizations seeking to sustain competitive advantage have moved quickly to develop systems to leverage the value of knowledge for this purpose (Robinson and Stern, 1997; Stewart, 1997).

Four theoretical traditions provide the basis of this paper—human capital theory, the nature of expertise, organizational learning, and knowledge management. Each of these areas brings an important element to the task of advancing our understanding of knowledge management. These four theoretical foundations are reviewed next.

Human capital theory. Human capital theory is a branch of economics. Economics addresses the allocation of scarce resources among a variety of human wants. Economics represents human wants and the scarcity of resources as essential and perennial elements in the study of any human activity. As with the social sciences in general, economics is not an exact science and predictions of economic developments are subject to error. According to Lewis (1977), however, economics is the social science "with the most sophisticated body of theory—that is, the one with the greatest predictability accuracy of all the social sciences" (p. 43).

Human capital theory is considered the branch of economics most applicable to education and human resource development. While Theodore Schultz' (1961) address to the American Economic Association was the first presentation of research on the return-on-investment in human capital, Gary S. Becker is generally credited as the leading developer of human capital theory. Classical economic theory considers labor as a commodity that can be bought and sold. Because of the negative connotations associated with the exploitation of labor by capital, it is understandable that human capital theory is still suspect in some circles. However, unlike the meaning traditionally associated with the term "labor," human capital refers to the knowledge, expertise and skill one accumulates through education and training. Emphasizing the social and economic importance of human capital theory, Becker (1993) quotes the economist Alfred Marshall's dictum that, "the most valuable of all capital is that invested in human beings" (p. 27). Becker considers education and training to be the most important investments in human capital.

The nature of expertise. Despite over thirty years of research, the question, "what is expertise?" has not been satisfactorily answered. Seminal works have identified seven key characteristics of expert performance (Chi, Glaser & Farr, 1988), methodological approaches to the study of expertise (Ericcson & Smith, 1991), the process through which expertise is developed (Anderson, 1982), the characteristics that distinguish the expert from the experienced non-expert (Bereiter & Scardamalia, 1993), and taxonomies of performance domains (Holton, 1999). Although the fields of education, information systems, and knowledge engineering have contributed to the present understanding of expertise, the majority of research on this topic has been done in cognitive psychology and the cognitive sciences (Kuchinke, 1997).

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While much remains to be learned about the nature of expertise, Herling (1997) proposed an operational definition of expertise synthesized from this research. His definition is based on three foundational concepts: (1) expertise is a dynamic state, (2) expertise is domain-specific, and (3) expertise is composed of knowledge, experience and problem-solving. Herling defined expertise as "the ability of the individual to consistently do the right things in the right way." Although inconclusive, current thinking on the nature of expertise provides a basis for classifying and representing different types of knowledge.

Organizational learning. Research on organizational learning has emphasized the importance of adopting a holistic, systemic approach to creating a work environment that cultivates the learner, learning processes, and a learning infrastructure. Catalyzed by the immensely popular work of Senge (1990), recent research has identified strategies for the transformation to a learning organization (Watkins & Marsick, 1993), models of organizational learning (Schwandt, 1995), models and instruments to assess team learning (Dechant, Marsick & Kasl, 1993), learning organization implementation reports (Bierema, 1997), and learning organization assessment instruments (Redding, 1997).

Organizational learning research has not yet integrated recent thinking about the role of knowledge management in organizational learning. As learning is viewed as the catalyst for developing personal and organizational capabilities, and as knowledge management can facilitate organizational learning, it seems reasonable that these two streams of research could be integrated. However, organizational learning has not emphasized structured knowledge and the use of information technology to capture and leverage knowledge (Davenport & Prusak, 1998). Some feel that the organizational learning approach deals with knowledge in too abstract and conceptual a fashion for it to have a meaningful effect on how organizations achieve their objectives (Grant, 1996; Stewart, 1997).

Knowledge management. Knowledge management has been defined as the process of creating, capturing, and using knowledge to enhance organizational performance (Bassi, 1997). Knowledge management is most frequently associated with documenting and codifying individuals' knowledge and then disseminating it through such venues as a company-wide database. Knowledge management also includes activities that facilitate human exchanges through traditional methods such as conversations and written documents. The idea that knowledge, like physical resources, is an asset worthy of investment has roots in human capital theory. But only recently have methods been developed for sharing knowledge that are sensitive to its unique properties.

Knowledge was first proposed as the primary form of capital by Milan Zeleny (1989). He argued for a reversal of the trend toward the continuing specialization of knowledge in favor of more integrative and multifunctional systems of knowledge management. Using a similar argument for knowledge integration, Stewart (1997) advised managers to focus more on what they know, that is, their intellectual capital, than what they own. To support this reorientation, he provided a comprehensive set of tools for measuring and managing intellectual capital.

Three seminal works have brought knowledge management to the forefront of organizational research: Nonaka and Takeuchi's (1995) groundbreaking study of knowledge generation and use by Japanese companies; Leonard-Barton's (1995) detailed description of how leading manufacturing companies capitalize on their knowledge; and Davenport and Prusak's (1998) comprehensive examination of the challenges and opportunities of knowledge management. These works provide a realistic assessment of the cultural and technical requirements of developing a knowledge management system in today's competitive, resource-constrained business environment.

The Need for a Theory of Knowledge Management

This section presents three brief arguments for the need for a theory of knowledge management. Each argument is based on Campbell's (1990) synthesis of the roles of theory.

Defining applied problems. Theory provides a means for identifying and defining applied problems. Organizations pursuing knowledge management often look for the best way to use information technology for this purpose. Knowledge management quickly becomes a solution (that is, information technology) in search of a problem. Yet organizational theory tells is that successful initiatives must first be rooted in the pursuit of organizational goals. Meeting customer requirements or key business needs are core purposes for which knowledge management should be undertaken. When appropriate, information technology serves as a primary means for knowledge dissemination. Theory helps us relate means to goals.

Evaluating solutions. Theory provides a means for prescribing or evaluating solutions to applied problems. If knowledge management is seen as a way to more effectively achieve business goals, then the success of a knowledge management project is often defined by how quickly and how well the business goals were achieved. However, theory tells us that organizational performance outcomes are determined by multiple factors,

including the knowledge of employees. The relative contributions of these factors cannot be directly inferred from success in achieving the outcome. Conversely, when organizational goals are achieved this cannot be considered a direct consequence of knowledge management. Performance outcomes may be achieved despite marginal contributions from knowledge management. On the other hand, a knowledge management project may be quite successful despite the failure to achieve organizational outcomes.

Responding to new problems. Theory provides a means for responding to new problems that have no previously identified solutions strategy. With few precedents from which to learn, organizations implementing a system-wide project to codify and disseminate knowledge face a daunting task. Yet theory has identified the key cultural and technical variables that are critical to successful system-wide change. These include a clearly articulated, overarching purpose for knowledge management, top management commitment to this effort, flexibility that allows the knowledge management system to adapt to changing methods and needs, and a change philosophy that values continuous learning and improvement. Thus, theory provides the basis for responding to novel problems.

In short, a theory is needed to keep knowledge management aligned with the business goals it is supposed to serve. A theory of knowledge management helps identify criteria against which project success can be evaluated, even when organizational success is elusive. A theory of knowledge management also provides a means for responding to new, seemingly overwhelming, challenges in managing knowledge that, because they are new, have no previously identified solution strategies.

Dubin's Methodology for Theory Building

Dubin (1978) provides a comprehensive methodology for theory building that is particularly relevant for applied fields such as education and management. More so than other theory building strategies, Dubin's eight-phase methodology for theory building lays out an explicit roadmap for the theorist to follow. The methodology offered by Dubin, a well-known writer on theory and theory building, is frequently used as a template for building theories in the behavioral sciences. The eight phases of theory building are: (1) units (i.e., concepts) of the theory, (2) laws of interaction (among the concepts), (3) boundaries of the theory (the boundaries within which the theory is expected to apply), (4) system states of the theory (conditions under which the theory is operative), (5) propositions of the theory (logical deductions about the theory in operation), (6) empirical indicators (empirical measures used to make the propositions testable), (7) hypotheses (statements about the predicted values and relationships among the units), and (8) research (the empirical test of the predicted values and relationships). The first five phases of the methodology represent the theory building component of Dubin's model, and the last three phases represent the process of taking the theory into real world contexts to conduct empirical research. Although theorists must consider the entire scope of Dubin's model for effective theory building, theory building and empirical research are often separated, and each of these is conducted as a distinct research effort.

A Theory of Knowledge Management

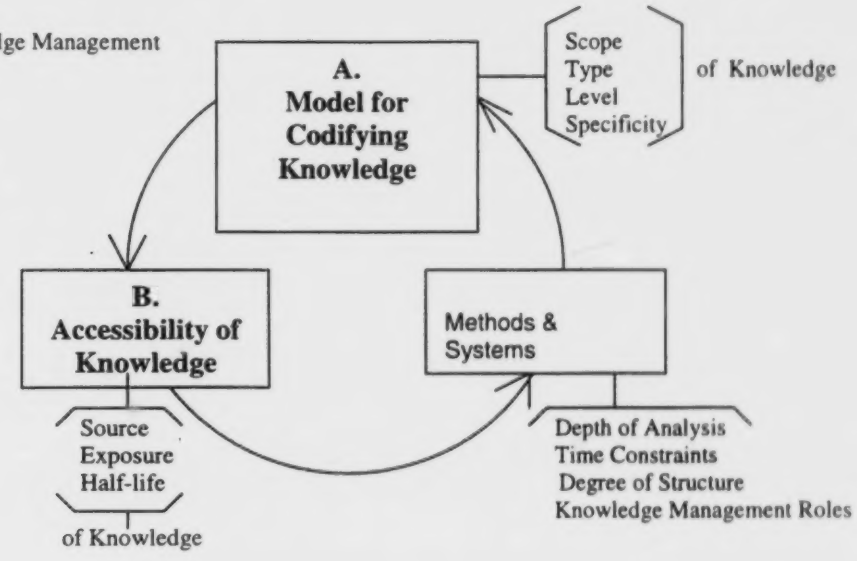
This section describes the development of the theory using the first five phases of Dubin's methodology for theory building.

Units of the theory. The units of the theory are the concepts, the building blocks, from which the theory is constructed. There are three basic units of the theory of knowledge management—a model for codifying knowledge, the accessibility of knowledge, and methods and systems for knowledge management. Each of these three units of the theory has several conceptual dimensions of its own that are described in the following sections. A model that represents the three units of the theory and the dimensions of each unit appears in Figure 1.

Model for Codifying Knowledge. Rather than attempt to describe what knowledge is, a task that has long intrigued the world's greatest thinkers and that is not yet resolved, a model for codifying knowledge is provided. This model facilitates decision making about what knowledge to share and how it should be shared. Accepting the lack of consensus on what knowledge is, the model reflects the simple tautology offered by Grant (1996) that knowledge is "what is known," and that there are many types of knowledge relevant to organizations. The model also emphasizes the role of the individual in creating knowledge that is consistent with Simon's observation that "all learning takes place inside individual human heads; an organization learns in only two ways: (a) by the learning of its members, or (b) by ingesting new members who have knowledge the organization didn't previously have" (1991, p. 125). The model described here is for codifying individual knowledge. The organization also supports individual knowledge creation and the sharing of knowledge among members. The role of the organization in

knowledge management includes establishing a climate of trust and support for sharing knowledge, developing the infrastructure for sharing knowledge, and other knowledge management roles discussed later in the paper.

Figure 1.
A Model of Knowledge Management



The model for codifying knowledge, adapted from Microsoft's "SPUD" system for profiling employees' knowledge (Cusumano and Selby, 1995), has four dimensions: (a) scope of knowledge, (b) type of knowledge, (c) level of knowledge, and (d) specificity of knowledge. (See Figure 1., A Model of Knowledge Management). The scope of knowledge is a four-tiered structure that addresses the range of an individual's knowledge. At the bottom level is foundational knowledge that is exemplified by entry-level competencies. The next level is knowledge that is unique to a particular job or role. An information systems analyst, for example, needs programming skills to diagnose problems in the system's operating codes. Next, knowledge can be functional in scope, a level that applies to all employees in a particular function or department. All employees in the accounting and finance area would be knowledgeable in financial analysis; every human resource professional would have expertise in matching employee performance with reward systems. At the top of the scope of knowledge structure is knowledge that is organization/industry in scope. This includes knowledge of the overall business the organization is in, the organization's strengths and weaknesses, the markets it serves, and the factors critical to the organization's success.

Within each of the four tiers of the scope of knowledge are two types of knowledge—explicit knowledge and tacit knowledge. Explicit knowledge is demonstrated through expertise in the use of specific tools and methods. Winter's (1987) taxonomic dimensions of knowledge distinguish explicit knowledge—knowledge that is articulable, observable in use, and independent of a broader system of knowledge, from tacit knowledge—that which is not articulated or observable in use. Winter cites Polanyi's classic observation about tacit knowledge that "*the aim of a skillful performance is achieved by the observance of a set of rules which are not known as such to the person following them*" (1962, p. 49, italics in original). "Not known as such" here means that the performer could not provide a useful explanation of the rules he/she followed to execute the performance. Thus, tacit knowledge, while available to the performer, is present at a deeper, unconscious level that cannot be articulated to others.

Within each type of knowledge there are also four levels of knowledge: (a) basic, (b) working, (c) leadership, and (d) expert. For a given type of knowledge, these levels can be specified in several statements that make the level clear and measurable. A person's level of knowledge can be rated by managers, peers, customers and others who are in a position to provide informed judgements about the person's level of expertise. Finally, the specificity of knowledge is an acknowledgement that an individual's knowledge can be from a specific domain or from multiple domains. For example, a high school principal has knowledge of theories of learning. This is knowledge drawn from a single domain. The principal is also knowledgeable about how to foster a high school environment conducive to learning through the use of resources and incentives for teachers. This knowledge is drawn from multiple domains including learning theory, performance management, and organizational change.

Accessibility of knowledge. The accessibility of knowledge is the degree to which knowledge is available to be shared throughout the system. The three dimensions of this unit of the theory are: (a) the source of knowledge, (b) the half-life of knowledge, and (c) the exposure of knowledge. (See Figure 1., A Model of Knowledge Management). The accessibility of knowledge is enhanced if the knowledge is consolidated and can be obtained from a single source of knowledge. Knowledge from a single, focused source is contrasted with knowledge that resides in several sources. Knowledge that is diffused among sources, especially sources of different types (for example, people, paper documents, and electronic media) is less accessible than knowledge from a single, focused source.

The half-life of knowledge is the time interval during which 50% of the knowledge will become obsolete and replaced by new knowledge. The novelty of new knowledge gives it visibility that, in the short-term at least, enhances access to this knowledge. Older knowledge, on the other hand, has the potential for a longer half-life by virtue of its age alone, but it must endure a longer period of scrutiny from emergent new ideas.

The exposure of knowledge is the degree to which knowledge is based on rules that are evident to the observer. Procedural knowledge can be directly inferred from the behavior of the performer (Bereiter and Scardamalia, 1993). This knowledge is easily represented by the observer from the sequence or manner of actions taken by the performer. This knowledge is more "exposed" to the observer than knowledge that is intuitive or conceptual in nature. Because conceptual knowledge is present at a deeper level, it is less exposed to observation. This is the "tacit knowledge" of Polanyi (1962).

Methods and systems for knowledge management. These are the strategies and techniques used to identify the knowledge and make it explicit and available to others. The four dimensions of this unit of the theory are (a) the depth of analysis, (b) the time constraints on managing knowledge, (c) the degree of structure in the methods/systems, and (d) the knowledge management roles. (See Figure 1., A Model of Knowledge Management).

The depth of analysis addresses the extent to which the knowledge management system makes the knowledge explicit to others. Detailed descriptions of one's working knowledge are communicated verbally in the stories and case examples people tell about their work, or in written form through research reports and other documents. On the other hand, a knowledge management system may simply identify the source of knowledge (for example, a person or document containing the knowledge) so that others can consult it directly. Knowledge mapping simply locates important knowledge in the organization and publishes this information in some kind of map or directory. The main benefit of knowledge mapping is in showing people where to go when they need expertise. Thus, the knowledge management system may present a detailed description of the knowledge itself (for example, presenting an on-line database or direct access to technical report) or direct the user to the source of knowledge using knowledge mapping. The depth of analysis, which is conceptually distinct from the depth of knowledge, is the extent to which the system makes the knowledge explicit.

The time constraints for finding solutions also determine the methods and systems used for knowledge management. Many circumstances allow time for search, reflection, and synthesis of knowledge. Others situations, particularly those involving customer service in which the customer needs assistance right away, require real-time performance. Methods conducive to rapid search and retrieval of knowledge are used in "help desk" applications that allow users to input data to classify the customer's problem and find a match between the problem and a solution selected from among pre-determined alternatives. This real-time system delivers domain-specific knowledge through case-based reasoning (CBR) technology (Kolodner, 1993). In situations not as constrained by time, methods for verbal or electronic exchange of knowledge (for example, e-mail or Lotus Notes) are more desirable.

The degree of structure of the methods and systems for knowledge management distinguishes between the methods best suited for archiving quantitative, structured knowledge and those best used for qualitative, unstructured knowledge. Structured content such as data on customers, products, prices, and specifications for service, warranty, and delivery fit well within relational database programs that give users desktop access. A database format allows information to be organized in several ways (for example, by customer or by product) with all the relevant data linked together. On the other hand, unstructured content such as the stories and experiences of experts, are best represented in web pages, Lotus Notes, and intranet technology, which allow users to shape their own narratives. Using a combination of structured and unstructured methods provides the flexibility to accommodate a broad range of knowledge, and prevents amorphous, tacit knowledge from being destroyed by being forced into rigid structures (Davenport and Prusak, 1998). The degree of structure in the knowledge management system is determined by the types of knowledge to be represented. This relationship is addressed in the next section by the theory's "laws of interaction."

Finally, knowledge management roles are necessary to initiate and manage the methods and systems for capturing and disseminating knowledge. Because knowledge resides in employees, it should be evident that all

employees, not just those charged with developing a knowledge management system, are responsible for sustaining the activities of knowledge management. While successful projects require people dedicated full-time to maintaining a dynamic knowledge management system, ultimately, the managers and workers who perform the organization's work (designing products, marketing, selling, managing resources) bear the responsibility for carrying out the day-to-day activities for managing knowledge. These people must be willing to share their knowledge and make use of the knowledge of others.

Laws of interaction. The relationships among the concepts (units) of a theory are described in the theory's laws of interaction (Dubin, 1978). The laws of interaction show how changes in one or more units of the theory influence the remaining units. Four laws of interaction govern the relationships among the units of the theory.

Especially for knowledge workers, knowledge rarely fits neatly into a single category of the "model for codifying knowledge." Despite our present inability to precisely describe and classify knowledge, organizations seek to capitalize on knowledge management to enhance innovation and learning. Thus, knowledge is both important and elusive. This dilemma is the basis for the theory's first law of interaction.

1. *All knowledge is unique and can be described in distinctive ways. A variety of methods exist for describing different types of knowledge. Systems for knowledge management must be founded on descriptions of knowledge using a model for codifying knowledge. (Therefore, the theoretical system represented in Figure 1., A Model of Knowledge Management, begins at box A and proceeds counter-clockwise around the model).*

For example, suppose an engineering manager assigns a small design project to a staff engineer. Although the staff engineer has produced similar designs in the past, the engineer needs data from recent technical reports to handle this design application. This means that some of the knowledge for this project resides in the engineer and some of the knowledge must be taken from recent publications. These are the primary sources of knowledge that determine its accessibility. To organize and standardize their work, engineers in this department have adopted a generic problem-solving model adapted to solving design problems. While some of their problem solving is rules-based and observable to others (for example, the diagram of a design problem and a list of alternative solutions), much of the engineers' knowledge is conceptual and not observable to others. These factors contribute to the degree of exposure of knowledge. Furthermore, the design project requires bringing together technology that has long been the industry standard with state-of-the-art engineering knowledge that has never been used in this application. These requirements define the half-life of knowledge for this project.

The type of knowledge needed by the staff engineer is described using the "model for codifying knowledge." The type of knowledge (that is, job/role in scope, domain-specific, both tacit and explicit) is needed to determine how accessible the knowledge is. This feature of knowledge is the basis for the theory's second law of interaction.

2. *The type of knowledge determines the accessibility of knowledge. (This is the relationship between box A and box B in Figure 1.). The accessibility of knowledge must be assessed before adopting the methods and systems that are most appropriate for knowledge management.*

The accessibility of knowledge determines what methods are used to make the knowledge available to others. Some of the knowledge used in the engineering example is non-observable (the engineering manager knowing which subordinate should be assigned the design project) and conceptual (the staff engineer's conception of how the new design project compares with past projects). This knowledge is not readily accessible to others. It is best shared through knowledge mapping and unstructured methods for knowledge exchange. Other types of knowledge, such as the procedure for making engineering assignments and the generic problem-solving method used by engineers, are rules-based and easier to communicate through structured methods, such as written procedures and models. This relationship between the accessibility of knowledge and the ways in which it is made available to others is the basis for the theory's third law of interaction.

3. *The accessibility of knowledge determines the choice of methods and systems for knowledge management. (This is the relationship between box B and box C in Figure 1.).*

All dimensions of a unit of the theory are considered together when determining how one unit relates to another unit of the theory. That is, we cannot take a single dimension of a unit and attempt to relate this dimension alone to another unit of the theory. For example, we may want to know how an organization's facilities are secured at the end of the day. A security guard may provide us with a list of security procedures, some of which require the guard to physically inspect and lock certain areas, and others involve electronic measures, such as setting the security alarm. Based on the exposure of knowledge alone, this would appear to be procedural knowledge, most of which can be observed. This knowledge is best captured with structured methods (for example, a list of sequential procedures written by the security guard).

However, the source of knowledge may not be limited to the security guard. Weekend security of the facility may be the responsibility of a security contractor or the police department, who may have different security procedures. Thus, the accessibility of knowledge is not simply a function of the security guard's procedures, a type

of rules-based knowledge that is easily exposed. The choice of method for sharing this knowledge must also take the multiple sources of knowledge into consideration. The need to consider all the dimensions of a unit of the theory is the basis for the theory's fourth law of interaction.

4. *The relationship of one unit of the theory to another unit is based on a composite assessment of the unit. The unit as a whole, not a single dimension, is considered with respect to how the unit relates to other units of the theory. (This law of interaction applies to all three units of the theory in Figure 1.).*

Boundaries. Dubin (1978) describes the boundaries of a theory as defining the domain over which the theory is expected to apply. The boundaries of a theory establish those aspects of the world the theory is modeling by distinguishing the theoretical domain from other aspects of the world not addressed by the theory.

The domain within which the theory is expected to hold is the domain of work. The distinction between work and all human activities separates the domain of the theory from non-work human activities not addressed by the theory. Within the domain of work, the theory applies to knowledge management. Because the theory addresses knowledge management performed in any organization that accomplishes work, there are no external boundaries specified for the environment. The theory applies to knowledge management regardless of the contextual factors of person, organization, time, or purpose.

System states. Dubin (1978) defines a system state as being a condition of the system being modeled in which all the units of the system take on characteristic values that have persistence through time, regardless of the length of the time interval. All units of the system have values that are determinant, that is, that are measurable and distinctive for that state of the system. A system state that accurately represents a condition of the system being modeled has three characteristics: (a) inclusiveness (all the units of the system—a model for codifying knowledge, the accessibility of knowledge, and methods and systems for knowledge management—are included in the system state), (b) persistence (the relationship between knowledge and method persists long enough to allow the goodness of fit between them to be determined), and (c) distinctiveness (all units take on unique values for that system state).

Propositions. Propositions of the theory are logical deductions about the theory in operation. Propositions of a theory are true because they are statements that are logically derived from the theory (Dubin, 1978). Propositions can then be subjected to empirical testing. Five propositions from the theory are specified next.

1. Leaders must identify the business goals to be served by a knowledge management project. A system for codifying and disseminating knowledge will not be sustained unless it is anchored in important business needs.
2. The importance of knowledge determines whether or not it should be included in the knowledge management project. The type of knowledge determines how it should be codified and disseminated. These are conceptually distinct issues that should be determined in this sequence.
3. Knowledge should be standardized (i.e., modified by substituting common terminology) and edited for just enough uniformity to allow the knowledge management system to work. The distinctive character of local knowledge must be preserved while making the knowledge available for widespread dissemination.
4. An optimal match can be achieved between the type of knowledge and the methods used to make it explicit. This is a matter of achieving fit between the knowledge, its accessibility, and the systems for sharing it.
5. The system for knowledge management is developed in such a way that it can change as rapidly and flexibly as the knowledge itself.

Implications for Future Research

Future research is needed to assess the theory in the real world through empirical research. The last three phases of Dubin's methodology are used to conduct empirical research. For this the researcher specifies empirical indicators to make the propositions testable, states hypotheses about the predicted values and relationships among the units of the theory, and conducts research to empirically test the predicted values and relationships. In short, the theory of knowledge management needs to be tested through empirical research.

Future research is also needed to assess the domain over which the theory rightfully applies. The concepts (units of the theory) from which the theory was developed are drawn heavily from private-sector and corporate models of organizations. The terms business, industry, product, customer, marketplace, and other private-sector concepts appear throughout this paper. The theory proposes that a knowledge management system draws its purpose from meeting a business need. What about community, government, non-profit and other non private-sector organizations whose mission and performance are assessed differently than those of private-sector organizations? Does the theory of knowledge management apply in these contexts as well? Testing the theory in non private-sector settings is needed to identify the domains over which the theory applies and does not apply. If the theory does not explain knowledge management relationships in non-profit settings, then it may be modified to do

so. Otherwise, its scope and boundaries should be altered to reflect its exclusive application to private-sector organizations. In short, research is needed to assess the relevance and applicability of the theory.

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Signposts on the Road to Knowledge Management

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Knowledge management (KM) is what an organization does to take its intellectual resources, both obvious and subtle, and make them fresh, meaningful, and accessible. What is KM and why is it important to HR professionals? What is the status of KM in organizations and HR and training units? Are consulting firms leading the way? These questions were investigated in this paper.

Keywords: Knowledge Management, Human Resource Profession, Performance Consulting

Knowledge Management (KM) involves recognizing, documenting, and distributing the explicit and tacit knowledge resident in an organization's workforce and customers. The mission is to provide the right information to the right people at the right time (Stewart, 1997c; Davenport & Prusak, 1998; O'Dell & Grayson, 1998). As good an idea as it is, knowledge management is far from guaranteed. To bring it about, both individuals and organizations are pressed to engage in new ways of thinking and acting (Davenport & Prusak, 1998; Agor, 1997; Stewart, 1997c). Knowledge management relies upon executive sponsorship, organizational policies, targeted technologies and individual and cross-functional generosity and energy. Bringing system and certainty to KM calls upon human resources professionals to engage in initiatives akin to the strategic directions encouraged by Ulrich (1997), Wognum (1998), and Rossett (1999). Are human resources and training professionals ready? What roles are these professionals now playing as regards KM? This preliminary study sought their views about KM in their units and larger organizations.

The Focus on Knowledge Management

Evidence of the contemporary interest in knowledge management is plentiful. In 1996 alone, there were at least six major conferences focusing on the subject. In the last three years, three journals dedicated to knowledge-related topics have emerged. A web site, www.brintcom, has grown like topsy. Knowledge management is beginning to happen:

- The World Bank identifies knowledge management as an "urgent necessity" for global development, and is spearheading knowledge-management initiatives in Third World countries (Lakewood Publications, 1998).
- Andersen Consulting has leveraged the knowledge of their worldwide workforce through its Knowledge Xchange system, a Lotus Notes-based system that allows storage of software code that can be re-purposed, templates for reports or budgets, summaries of literature read by consultants and relevant to the industry, employee profiles, and anecdotal experiences with challenges and customers. At the moment of need, wherever and whenever, Andersen employees can access people, examples, presentations, and data (Stewart, 1997c).
- Chevron Corporation sets up Best Practice Teams throughout the corporation. The team that shares knowledge related to energy-use management saved Chevron $150 million on its annual power and fuel bill (Martinez, 1998; O'Dell & Grayson, 1998).

Moving to Knowledge Management

While some are engaged in KM efforts, initiating KM in an organization is a challenge. Research conducted by The American Productivity & Quality Center (APQC) revealed that specific successful practices would typically linger in a company for years, unrecognized and unshared. However, even when recognized, it took over two years on average before other sites within a company began to actively adopt the practice, if at all (Szulanski, 1995).

The nature of knowledge is one reason it is difficult to move an organization to KM. Consider knowledge as "a fluid mix of framed experience, values, contextual information, and expert insight" (Davenport & Prusak, 1998 p. 5). Allee (1997) further notes that knowledge is "messy."

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While the meaning of knowledge is at the heart of the challenge, there is little the human resources professional can do about definition. Thus we have chosen to look at five other influential levers which are, though formidable, more within the ken of human resources and training professionals: culture and policies; access to information; technologies; knowledge management as priority; and learning about KM.

Organizational Culture and Policies

Davenport and Prusak (1998) describe the first step in any knowledge initiative as recognizing there are markets for knowledge. This involves an attempt to propel employees to want to put their 'knowledge products' on the shelves. Some employees will feel they are being asked to give away for free that which they have come to perceive as their own valuable possession or that which distinguishes them and provides job security.

Thomas Stewart (1997b) poses a question that gets at the ripeness of the culture for KM: "When you return from a convention, which do write up first, your expense account or your trip report? Which contains more creative thinking? Which is read more attentively" (p. 160)?

Access to Information

According to Stewart (1997c), it is critical to "connect people to data, experts, and expertise" when they perceive a need (p.132). Hewlett Packard provides an example. HP has established a database comprised of HP Frequently Asked Questions (FAQs) databases. This enables employees to anticipate customer and employee concerns and repurpose and tailor responses.

Enabling Technologies

Technology is critical for KM, but not sufficient. Daveport and Prusak (1998) put it like this, "It's usually much harder to get organizational consensus for behavior change and new roles than it is for technology–and if you start with technology, the other necessary factors may never materialize"(p. 166).

Learning About KM

In a 1997 review of 70 knowledge management projects, the American Productivity and Quality Center (APQC) found that only two projects involved training staff or human resource managers regarding their roles in KM initiatives. Carla O'Dell, APQC President, states "To the extent that training implies classical job skills, you might expect it to be out of the loop. But to the extent that training is supposed to be part of team-building and change management, you'd think it should be very involved" (Stamps, 1997, p. 44).

Study Purpose and Methodology

Extracting, packaging, and distributing information is not new ground for human resource and training professionals (Rossett & Gautier-Downes, 1991; Gery, 1989; Hackos & Stevens, 1997). This preliminary study pursued the authors' curiosity regarding how far beyond job aids and documentation the profession has come, investigating the knowledge management practices reported by volunteer respondents. Based upon the five KM-influencing levers identified in the literature, we assessed readiness associated with knowledge management to tease out progress towards the systems and goals associated with KM. Additionally, we sought to understand the roles human resource and training professionals reported themselves to be playing in KM. Were they supporting larger knowledge-related initiatives and setting the pace through their own departmental practices? Were consulting firms leading the charge towards KM, as suggested by the literature?

Methodology

Instrumentation

A review of the literature identified key factors associated with the management of knowledge in organizations. These factors were transformed into a 44-question survey. The instrument included 29 questions focused on KM-related practices within the organization at large and 15 similar questions related to the respondent's unit. The majority of questions asked individuals to indicate the regularity of different KM practices and activities on a three-point Likert scale. We asked for ratings regarding items like: "Our people tend to generously share their ideas," and "Our people have systems to find the right person."

Sample and Data Collection Procedures

The survey was distributed to human resources, training and performance technology professionals who were voluntary attendees at a national conference featuring topics of interest to individuals in human resources and training occupations. An opportunistic sampling strategy was employed to collect responses from 122 individuals during March of 1998. The survey took about ten minutes to complete. The greatest participation was from individuals representing financial service/insurance (16%), manufacturing (16%) and consulting firms (13%). Thirty-three percent classified themselves as instructional designers, 30% as managers or executives, and 28% as performance technologists.

Data Analysis

A Cronbach alpha measure of reliability using SPSS was used to analyze the 26 3-point Likert scale questions associated with the organization at-large. Based upon the reliability analysis, two questions were eliminated, resulting in a scale of 24 questions with an alpha coefficient of .86. -tests were then conducted to determine differences between industry groups and the presence of a formal technology-based KM system. Differences between the organization at-large and the respondents' individual units were analyzed using paired *t*-tests.

The limitations of this preliminary study and analysis should be noted. In particular, an opportunistic sampling strategy was employed to obtain a small *n*. Additionally, the study is exploratory rather than hypothesis-based. Analysis to identify individual scales and increase reliability based on the five domains identified in the literature is being conducted for future reporting.

Results

Results of this study suggest that knowledge management is not yet pervasive in the view of respondents. There is, however, evidence of positive movement.

Formal KM Systems in Organizations

Eight percent of respondents admitted that knowledge was not captured in their organization. Sixty-nine percent worked for organizations that record *some* knowledge such as best practices or lessons learned. Of those reporting the capture of knowledge, 42% commit knowledge to a paper format and 27% to technology-based systems. Just 16% of the total sample worked for an organization where people "collaborate using a technology-based system that captures and provides access to knowledge."

Responses from individuals representing consulting firms mirrored published reports that these organizations are leading the way in knowledge management activities. According to these respondents, half of their firms use a technology-based system to capture and provide access to knowledge, compared to just 12% for the remainder of the sample.

Organizational Commitment and KM

To understand where organizations stand on the road to knowledge management, a mean was calculated for responses to 24 questions about KM-influencing practices in the respondents' organizations. This mean is based on a three-point scale, with 1=rarely, 2=occasionally, and 3=typically. The scale included questions related to customer-focus, knowledge sharing, organization culture, technology information systems, and learning activities and practices. The total sample realized a mean score of 1.98, suggesting that KM-related activities occur occasionally. Individual mean scores ranged from a low of 1.37 to a high of 2.65.

Items 13 and 14 asked respondents to report whether or not their organizations had people and technology devoted to capture, distribute and maintain knowledge systems. If organizations had such formal indicators as technology and staffing in place, does it correlate to other KM elements? The association with an extant KM system proved significant, with a mean of 2.12 for organizations with a KM system, versus 1.91 for those without (t=4.085, p=.000). Table 1 presents this analysis.

Table 1

Results of t Test using Organization Scale between Organizations With and Without Formal Knowledge Management Systems

Group	*Mean Score*	*t Value*	*2-tail Probability*
Organization KM Score			
With KM System *(n=55)*	2.12	4.085	.000
Without KM System *(n=65)*	1.91		

KM by Industry

Many real world examples of KM come from consulting firms, either in their internal efforts or in projects for their clients. Are they really further along the road on knowledge management than others? This question was initially supported by the fact that consulting firms were four times more likely to have a formal KM system comprised of staff and technology when compared to all other represented industries. A *t*-test for independent groups compared the mean organization KM score of the consulting firms to the remainder of the sample. Table 2presents the significant differences between the two groups, perhaps providing signposts for professionals who seek to nudge their organizations towards KM.

Table 2

Results of t Test between Consulting Firms and All Other Organizations

Group	*Mean Score*	*t Value*	*2-tail Probability*
Organization KM Score			
Consulting Firms *(n=16)*	2.30	-5.377	.000
All others *(n=106)*	1.93		

In what specific areas have consulting firms moved ahead? Table 3, a *t*-test for independent groups, provides the mean scores by item for the subset of questions with significant differences in responses between consulting and non-consulting groups.

HR Leadership in KM

While consulting firms are featured in the published KM literature, HR and training professionals have a much lower profile in those reports. We anticipated a leadership role, since many of the concepts associated with KM are familiar and congruent (Ulrich, 1997). Would HR and training units report more KM activities and initiatives in their home units than in the organization at large? A paired *t*-test was performed to compare individual unit practices to those of the organization. Table 4 presents differences between the two entities.

Discussion

Providing KM Leadership

Respondents believe they are more customer focused than the larger organizations in which they reside. They also credit themselves with finding resources and linking those resources to needs. In addition, they report themselves to be knowledge workers who generously share their ideas. While these attributes are laudable, they also reside in rather close proximity to typical human resource roles. Strong KM leadership will likely require human resource and training units to go beyond their conventional ken to forge new and flexible partnerships with MIS and customers.

Consulting Firms as Pioneers

As suspected, consulting firms are further along the KM path as evidenced by significantly higher ratings on questions about unrestricted access to information, supportive knowledge systems, and encouragement for communities of practice. Individuals from consulting firms are more likely to perceive themselves as knowledge workers and to point to incentives and reduced command and control management practices. Why? Perhaps it is the independent and even isolated status of some consultants who find themselves in Kuala Lumpur, Buenos Aires, or Boise, where each consultant depends upon ready access to ideas, examples and systems that increase the value they add to the customer.

Table 3

Results of Independent Samples t Test for Questions with Significant Differences Between Consulting Firms and All Other Organizations

Question	*Non-Consulting Firm Respondents (n=106)* Mean	*Consulting Firm Responses (n=16)* Mean	*t-value*	*significance*
Our people have a good sense of what a knowledge worker is.	1.71	2.44	t = -3.580	p = .000
Our people consider themselves knowledge workers.	1.91	2.75	t = -3.821	p = .000
Our people tend to generously share their ideas.	2.08	2.63	t = -3.081	p < .003
People in our organization are allied with their professions and communities of practice even more than with our company or organization.	1.76	2.33	t = -2.851	p < .005
Our people self-assess in order to get a fix on directions for growth.	1.73	2.33	t = -2.928	p < .004
Our people have systems to find the right person, obtain quick answers, weigh alternative approaches, and examine numerous examples.	1.70	2.63	t = -5.143	p = .000
Our managers and supervisors have shifted their command and control perspectives to better suit how knowledge workers approach their work.	1.68	2.44	t = -4.262	p = .000
When a manager seeks to reduce access to information, he or she must justify the restriction.	1.55	2.40	t = -3.775	p = .000
Our people are expected to spend time learning as much as they can about our customers.	1.94	2.60	t = -3.095	p < .002
Our customers can point to examples of how we use our knowledge of their needs to customize the products and services we create for them.	1.92	2.69	t = -3.768	p = .000
We actively educate our customers about our business.	2.25	2.75	t = -2.897	p < .004

Table 4

Results of the Paired t Tests Between KM-Related Organization and Unit Activities (n=122)

	Question	*Mean*	*t-value*	*significance*
Org	Our people consider themselves knowledge workers.	2.03	t = -6.397	p = .000
Unit	We consider ourselves knowledge workers.	2.54		
Org	We use both instructor-led classes and technology-based learning experiences as the primary means to develop the skills our people need.	2.41	t = -1.070	p < .287
Unit	We use both instructor-led classes and technology-based learning experiences as the primary means to develop the skills people in our organization need.	2.48		
Org	Our people tend to generously share their ideas.	2.15	t = -6.748	p = .000
Unit	We tend to generously share our ideas.	2.61		
Org	Technology in our organization is keeping up with our information needs.	2.00	t = -2.657	p < .009
Unit	Technology keeps up with our needs.	2.14		
Org	Our people have systems to find the right person, obtain quick answers, weigh alternative approaches, and examine numerous examples.	1.82	t = -6.082	p = .000
Unit	We can find the right person, obtain quick answers, weigh alternative approaches, and examine numerous examples.	2.28		
Org	Our people spend more time with our customers than with each other.	1.84	t = -2.756	p < .007
Unit	We spend more time with our unit's customers than with our own people.	2.09		
Org	Our customers can point to example of how we use our knowledge of their needs to customize the products and services we create for them.	2.15	t = -3.418	p < .001
Unit	Our unit's customers can point to examples of how we use our knowledge of their needs to customize the products and services we create for them.	2.37		
Org	We have long-term relationships and repeat business with our customers.	2.76	t = .780	p < .437
Unit	We have long-term relationships and repeat business with our unit's customers.	2.72		
Org	Customer feedback is captured and used to improve what we already do.	2.30	t = -1.364	p < .175
Unit	Customer feedback is captured and used to improve what we already do.	2.40		
Org	Customer feedback and needs are used to generate new initiatives.	2.28	t = -1.364	p < .175
Unit	Customer feedback and needs are used to generate new initiatives.	2.38		

Commitment Counts

Dabbling in KM is futile. The literature trumpets this point and it is supported by this study. When responses to KM technology and personnel allocation are combined to represent organizational commitment,

significant differences appear. The organizations that invest in both the people and the technology are the ones that are moving to KM.

A Long Row to Hoe

While sixty-nine percent of respondents report that they are capturing some knowledge, only sixteen percent report a collaborative technology-based system. An example of the need for improvement relates to an item about access to information. In most organizations the default is restricted access, an obvious barrier to KM. Another example is managerial command and control. Regardless of the importance the literature places on shared decision-making for knowledge workers, respondents in this study say it is not yet typical in their settings. A final example is provided by a large positive response to our query about information overload. The perception of overload is antithetical to a KM system, where meaningful structure and access is key.

Forward Steps

All is not gloomy. Consulting firms are defining the way, followed surprisingly closely by a small but significant utility company response. Overall, respondents report that individuals in their organizations are taking more responsibility for their own professional planning and development. They also acknowledge transition to instructor and technology delivered professional development, perhaps a tentative step towards a technology knowledge base, so much a part of any KM system.

With prior impetus from the quality and performance technology movements (Deming, 1993; Stolovich & Keeps, 1992; Rossett, 1999), these human resource and training professionals report a healthy customer focus. They go beyond paying attention and listening to an active quest for, and use of, customer feedback.

Conclusion

People who work with things or deliver non-professional services will have fallen from 83 percent of the working population in 1900 to 41 percent by the year 2000. Those who primarily work with information were 17 percent of the workforce in 1900, and will be 59 percent at the turn of the century (Stewart, 1997c, p.40). How will human resource professionals respond to this change? Will departments and professionals model the shift to KM? Or will MIS shape KM initiatives because technology is a blatant and critical element of the shift? This exploratory study suggests that while there are some reasons for optimism, much remains to be done.

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The Relationship Between Human Resource Development and Business Strategy in 1998 Fortune 500 Companies

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Human resource development (HRD) professionals are increasingly expected to align their activities with the business strategy of the organization. However, not all organizations have the same strategy or the same needs. The focus of this study was to determine if significant relationships exist between business strategy and HRD. The sample for this study was 52 1998 Fortune 500 companies. The results indicate that significant relationships do indeed exist between business strategy and HRD.

Keywords: Strategy, Human Resource Development and Strategy

Organizations that wish to attain or retain a competitive advantage in the increasingly changing global market must ensure that the focus of their human resource (HR) function is strategically aligned with their business strategy (Hamel & Prahalad, 1994). Nadler and Tushman (1992) state that strategy comprises the decisions that allocate scarce resources against the constraints and opportunities of a given environment, specifically choices of markets, offerings, technology, and distinctive competence. Business-level strategy is primarily focused on the question, "How are we going to compete?". The most prominent business strategy typology that has been studied and validated extensively (Bird & Beechler, 1995; McDaniel & Kolari, 1987; Shortell & Zajac, 1990) is that of Miles and Snow (1978, 1994) which offers three ideal types of business strategy: 1) Defender (focused primarily on cost efficiency); 2) Prospector (focused primarily on innovation); and 3) Analyzer (focused primarily on quality).

In the globally competitive, technologically-advanced market where brain power and human resources are an organizations greatest asset (Thurow, 1997), HRD is increasingly expected to link their programs with the business strategy of the firm. Combining strategy and human resource development activities has become a vital source of competitiveness for all organizations (Ulrich, 1998). Rather than promote a dichotomy between business strategy and the development of individuals, products, or services, organizations must integrate these activities to create a sustainable competitive advantage (Seibert, Hall, & Kram, 1995).

Empirical research has shown support for a contingency perspective of strategic HR practices suggesting that the linear implications of a universal, or "best practices," perspective are too simplistic and that effective HR practices are actually contingent upon the business strategy of the firm. Several conceptual models have been introduced that address the human resource function in contingent relation to business strategy and other organizational characteristics. One such model is provided by Beer, Eisenstat, and Biggadike (1995) which provides a diagnostic model of organizational alignment and adaptability.

Theoretical Perspective

The theoretical perspective underlying this study falls within economic theory, specifically human capital theory. Several authors have addressed economic theory as it relates to business strategy, functional business units, and/or human resource development (Delaney, 1996; Jackson, Schuler, & Rivero, 1989; Weinberger, 1998). From micro economics, human capital theory suggests that people possess the knowledge, skills, and abilities that provide economic value to firms (Miles & Snow, 1995; Weinberger, 1998; Youndt, Snell, Dean, and Lepak, 1996).

An investment in human capital is a source of sustainable competitive advantage for firms (Thurow, 1997) and effective management of human capital, not physical capital, may be the ultimate determinant of organizational performance (Reich, 1991). Assuming heterogeneity among firms with respect to their human capital, competitive advantage is possible if a firm insures that its people add value to its production processes and that its pool of human capital is a unique resource, both difficult to replicate and difficult to substitute (Huselid, Jackson, and Schuler, 1997). Specifically, Huselid et al. state that firms can use training to insure the unique skills needed in their human capital to be competitive.

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Traditionally, HRD has been seen as an expense rather than an investment, but as human capital becomes more valuable economically and natural resources less important (Thurow, 1997), HRD has increased pressure to show its value to the organization. The problem with most common types of HRD programs is that they are seen as solutions in and of themselves, rather than as parts of an overall system to support the business strategy (Cocheu, 1992). Often, it seems HRD programs are implemented with little intentional consideration for the competitive strategy of the organization making it difficult to show the value of the programs as investments in the future success of the firm.

With little empirical evidence on the nature of the relationship between competitive strategy and HRD practices, organizations have little guidance on HRD practices that will likely support their business strategy, increase the value of their human capital, and provide a source of sustainable competitive advantage. This study took a necessary step in beginning to understand this relationship.

The purpose of this study was to identify if a significant relationship exists between business strategy and HRD practices. The variables used to measure HRD activity were primarily based on McLagan's (1996) definition of HRD and were chosen because they provide a broad overview of the HRD function. The following research questions guided the study:

1. What is the relationship between business strategy type and the extent of emphasis on various types of training?
2. What is the relationship between business strategy type and the extent of emphasis on various job categories (e.g. executive) of recipients of training?
3. What is the relationship between business strategy type and the amount of training required by the company (e.g. Motorola's 40-hr training requirement)?
4. What is the relationship between business strategy type and the types of organization development (OD) interventions?
5. What is the relationship between business strategy type and the extent of emphasis on various levels of organization development (OD) interventions?
6. What is the relationship between business strategy type and HRD dollars per employee?
7. What is the overall relationship between business strategy and the HRD function?

Method

Research Design

A multiple method descriptive design that was primarily quantitative and correlational in nature was used in this study. The sample for the study was 52 companies from the 1998 Fortune 500 listing of the 500 largest U.S. companies by annual revenue. Instrumentation included a mail questionnaire (with a fax and e-mail version) and a telephone interview guide. A survey was the major method of data collection used by the researcher with an amalgamation of mail questionnaire and phone interview.

Data analysis included basic descriptive statistics, analysis of variance, discriminant function analysis, and content analysis. The statistical analyses was used to identify significant relationships while content analysis was used to identify themes that supported or added to findings from statistical analysis for a more complete description of these relationships.

Population and Sample

The population for this study was all 1998 Fortune 500 companies. This population was chosen because they represent the largest organizations in the U.S. for a broad base to gather a representative sample of the business strategy types in Miles and Snow's typology. This population also consisted of companies that were performing well and were large enough to have substantive HR departments with an active HRD function to provide rich, descriptive data necessary to identify significant relationships between business strategy and HRD.

A purposive sampling technique was used to establish a sampling frame of 178 companies. Because it was essential to this study to have a representative portion of the sample identified within each strategy type, an expert panel was used to establish the sampling frame. Ninety companies were contacted by phone and 52 were willing to participate in the study. Of the 52 that were willing to participate, 18 were defenders, 16 were analyzers, and 18 were prospectors. This sample assured that at least 15 companies were represented in each strategy type which was necessary to meet minimum requirements of the statistical analyses.

Twenty different industries were represented in the study, and no specific industry comprised more than fifteen percent of the total sample. The industries represented were: 1) aerospace, 2) auto, 3) banking, 4) chemicals, 5) consumer products & services, 6) durables, 7) electronics, 8) energy, 9) financial, 10) food & beverage, 11) health, 12) insurance, 13) materials & construction, 14) media, 15) mining & metals, 16) retailers, 17) technology, 18) telecommunications, 19) travel & transportation, and 20) utilities. The food & beverage industry comprised fifteen percent of the total sample, retailers comprised twelve percent of the total sample, and energy and technology each comprised approximately ten percent of the total sample. All of the companies had more than 3,500 employees with a range of 3,500 to 850,000 employees. Annual revenue ranged from approximately $3 billion to $120 billion while annual profit ranged from approximately $2 million to $3.8 billion.

No industry comprised more than twenty-two percent of companies in any business strategy subgroup. Companies in the retail industry comprised twenty-two percent of defenders, while companies in the technology industry comprised twenty-two percent of prospectors. Analyzers did not have a notable percentage of companies in any one industry. Average breakdowns by business strategy subgroup are provided in Table 1.

Table 1
Description of Sample by Business Strategy Subgroup

	n	Avg. Fortune 500 Rank	Avg. Annual Revenue ($ in millions)	Avg. # of Employees	Avg. Annual Profit ($ in millions)
Defender	18	142	20,893	114,947	967
Analyzer	16	145	15,107	79,376	519
Prospector	18	135	13,705	36,044	1,535

Instrumentation

Two primary instruments were used in this study: 1) a mail questionnaire; and 2) a telephone interview guide. The mail questionnaire was designed to record quantitative data focusing first on general department information, then information related specifically to training, next OD information, then overall HRD and business strategy information. This questionnaire was available in fax, e-mail, and regular mail forms, although participants only requested fax and e-mail versions. The questionnaire was designed to take 10-15 minutes to complete and included close-ended questions and requests for numerical data.

The telephone interview guide was designed in two sections. The first section was designed to introduce the study, while the second section was designed to guide follow up questions after completion of the questionnaire to solicit primarily qualitative information through open-ended questions. The interview was also designed to take 10-15 minutes and included a code number corresponding with the mail questionnaire code. Both instruments were pilot tested with 3 companies similar to those in the final sample.

Data Collection

The major method of data collection in this study was a survey, including an amalgamation of a mail questionnaire and phone interview. Data collection took place from July 15, 1998 through November 20, 1998.

The researcher located HRD manager contact information from either the ASTD, ISPI, AHRD, or SHRM membership directories. HRD managers were considered managers or directors of corporate departments such as training and development, corporate education, and performance development. These managers were in a position in which they were both aware of the business strategy of the company and also had oversight of company HRD practices, thus were able to provide accurate information regarding both variables.

Data collection began by contacting the HRD managers by phone, then explaining the purpose of the study, why and how they were selected, the limited time commitment involved, and asked for their participation in the study. Upon agreement to participate, the researcher either faxed or e-mailed the questionnaire directly to the participant with a note attached indicating the agreed upon date and time for the follow up interview. After the participant's answers were recorded on the questionnaire and contact was made for the follow up interview, the researcher then proceeded to ask the questions on the interview guide over the phone while recording the participant's answers on the interview guide. If the participant or researcher deemed it necessary to gather information from another source, the researcher gathered contact information for that source, repeated the process, then combined the data.

Data Analysis

Data analysis included the use of basic descriptive statistics, analysis of variance (ANOVA), discriminant function, and content analysis. Basic descriptive statistics were used to provide a profile of each strategy type and its corresponding aggregate measures across the HRD variables. The researcher then used one-way ANOVA with a Scheffe post hoc multiple comparison analysis to determine whether the business strategy types differed significantly among themselves on the HRD variables being studied.

Discriminant function analysis was then used to determine if the HRD variables found significantly related to business strategy type in the ANOVA could reasonably predict membership in either the defender, analyzer, or prospector business strategy type. Sapsford & Jupp (1996) report that social scientists see discriminant function analysis as a very useful analytical tool because it can be used both to predict the group to which a person or 'case' might belong on the basis of a set of characteristics which that person or case holds, and to identify which variables are most powerful in distinguishing between the members of different groups.

In addition to statistical analysis, the researcher used content analysis to determine if themes arose from the qualitative data that supported and/or enhanced the statistical analysis. Answers to the follow up interview were systematically reviewed for common themes within each business strategy type. These themes as well as frequency of answers were recorded in a combined spreadsheet set up with the questions listed on the Y-axis and business strategy types listed across the X-axis. This spreadsheet was used for comparison of themes across business strategy types. The statistical analysis and content analysis combined to provide concise, descriptive findings.

Findings

Overall, findings indicate that significant relationships do exist between business strategy types and certain HRD activities. The research questions are combined into three sections and addressed below (also see Table 2).

Relationship Between Business Strategy Type and the Extent of Emphasis on Training

Types of training. Respondents were asked what percentage of overall departmental training was allocated to various types of training over the past year. Results indicated that percent of training time allocated to management/supervisory training, percent of training time allocated to team training, and percent of training time allocated to customer service training showed significant between-group variances at $p<.15$. An expert statistician and the researcher deemed this p-value appropriate to use as a cut off mark for inclusion in the discriminant function analysis because of the overall sample and subgroup sample sizes. All respondents from the defender, analyzer, and prospector strategy types reported that their training does support the overall business strategy.

Job categories of training recipients. Respondents were asked what percentage of overall departmental training time was allocated to various job categories over the past year. Results indicated that the percent of training allocated to line workers, middle managers, and professionals had significant between-group variances.

Training required by company. Few companies reported having a minimum amount of annual training required for all employees. Only four defenders (range = 16 to 50 hrs.), two analyzers (range = 1 to 40 hrs.), and three prospectors (range = 50 to 80 hrs.) reported having a minimum amount of annual training for all employees.

Relationship Between Business Strategy Type and the Extent of Emphasis on OD

Types of OD interventions. Respondents were asked what percentage of overall departmental time was allocated to various types of OD interventions over the past year. Results indicated that time allocated to strategic OD interventions showed significant between-group variances. When asked to describe a significant OD intervention implemented over the past year, defenders (62%) described human resource-related interventions, analyzers (58%) described strategic OD interventions, and prospectors (56%) described HR process interventions.

Level of OD interventions. Respondents were also asked to indicate the percentage of overall departmental OD interventions allocated to various organization levels. Results did not indicate a statistically significant between-group variance. However, defenders (47%) reported having more success and increases at the individual level, analyzers (40%) reported the same at the organizational level, and prospectors (55%) at the group or team level.

Overall Relationship Between Business Strategy and the HRD Function

HRD dollars per employee. Results indicated that HRD dollars per employee showed a significant between-group variance. Results also indicated that prospectors have significantly more HRD dollars per employee than

defenders and analyzers. Defenders (67%), analyzers (53%), and prospectors (67%) said the HRD budget has increased over the past five years.

Overall HRD. Respondents were asked to indicate the percentage of overall departmental resources that were devoted to three major components of HRD (i.e. Training, OD, and CD) over the past year. Results did not indicate a statistically significant between-group variance. However, when asked how these percentages have changed over the past five years, defenders (63%), analyzers (57%), and prospectors (50%) said that OD had increased. Defenders (44%) also said that CD had increased. Defenders, analyzers, and prospectors all reported that the business strategy of their company has a large impact on the HRD function.

Discriminant Function Analysis. The eight variables found to be significantly different across the business strategy types were HRD dollars per employee, time spent on management training, time spent on team training, time spent on customer service training, training allocated to line workers, training allocated to middle managers, training allocated to professionals, and time spent on strategic OD interventions. Of these variables, HRD dollars per employee, time spent on team training, and time spent on strategic OD interventions showed the strongest relationship to business strategy type (see Table 2).

Discriminant function analysis was used to determine if this collective set of variables could predict membership in the three different business strategy types. The overall predictive capability of these variables was 69 percent, showing that using these variables to predict business strategy type membership would presumably double the likelihood of correct placement. The strongest predictive capability was for placement of defenders (77%), slightly less with prospectors (69%) and analyzers (62%). Table 3 presents an overview of major findings.

Table 2
Variable Pooled Means, Pooled Standard Deviations, Means by Group, Standard Deviations by Group, and Between-Group P-values

	Pooled means (s.d.)	Defender means (s.d.)	Analyzer means (s.d.)	Prospector means (s.d.)	Between-group p-value
HRD Dollars per Employee	507.18 (890.9)	210.08^{B} (249.20)	364.00^{B} (358.20)	947.46^{A} (1480.10)	.042**
Management Training	29.679 (15.75)	30.692 (15.96)	36.231 (16.85)	22.115 (14.36)	.065*
Team Training	9.3077 (8.824)	9.5385^{AB} (7.253)	6.6923^{B} (8.138)	11.6923^{A} (10.711)	.054*
Customer Service Training	9.897 (10.80)	14.0385 (12.31)	8.3462 (11.69)	7.3077 (7.85)	.139
Line Workers Job Category	23.500 (20.66)	32.538^{A} (22.29)	9.769^{B} (12.87)	28.192^{AB} (24.87)	.066*
Middle Managers Job Category	16.000 (11.33)	11.192^{AB} (7.84)	24.615^{A} (16.67)	12.192^{B} (6.80)	.082*
Professionals Job Category	16.821 (18.82)	5.885 (5.18)	19.577 (21.88)	25.000 (23.61)	.107
Strategic OD Interventions	19.963 (19.67)	18.946^{AB} (24.00)	29.769^{A} (22.21)	11.173^{B} (9.57)	.028**
n		13	13	13	

*p <= .10, **p <= .05

note: superscripts represent significant differences between paired groups found in Scheffe post hoc multiple comparison at p <= .10.

Table 3
Major Findings by Business Strategy Type

Defenders	Analyzers	Prospectors
-fewest HRD dollars/employee	-moderate HRD dollars/employee	-most HRD dollars/employee
-emphasis on management/supervisory and job/specific technical training and customer service training	-emphasis on management/supervisory and job specific technical training	-emphasis on job specific technical training and team training
-emphasis on line workers	-emphasis on middle managers	-emphasis on professionals
-emphasis on HR type intervention	-emphasis on strategic type OD interventions	-emphasis on HR process type interventions
-increase in HR process type interventions	-increase in strategic and organization structure type interventions	-increase in HR process and technology type interventions
-emphasis at the individual level	-emphasis at the organizational level	-emphasis at the group or team level
-increase in OD and CD	-increase in OD	-increase in OD

Discussion

Extent of Emphasis on Training

With a focus on high growth, intense market penetration, increased production, and cost efficiency, defenders seem to place a greater emphasis on management/supervisory training, customer service training, and training for line workers. These findings are consistent with Schuler and Jackson's (1987) report that defender types have a high need for promotion from within and a high degree of concern for quantity of output, which would likely increase supervisory training and training for line workers who are closest to the customer and to the production of that output.

Unlike defenders, analyzers have a stronger focus on process adaptation, high quality products and services, and advanced engineering and manufacturing skills to make new products or services better. Results of this study indicate that analyzers emphasize management/supervisory training and training for middle managers. These results are also consistent with Schuler and Jackson's finding that analyzer types have high levels of employee participation, which would likely increase training for middle managers who must assume new skills in coaching and encouraging employee participation rather than a more traditional role of control and command. Middle managers must also oversee the processes implemented to create high quality products and services.

Prospectors have a broad, changing product line focused on product innovation and market responsiveness in order to be 'first in' to new markets. Findings show that prospectors place a greater emphasis on job specific technical training, team training, and training for professionals. Schuler and Jackson (1987) found that prospector types require a high level of cooperative, interdependent activity and rely on a high degree of creative behavior in order to continually create new innovations. Thus, it appears likely that prospectors have a larger percentage of professional positions that require technical skills and a great deal of communication between teams to remain competitive by have the most innovative products or services first in the market.

Extent of Emphasis on Organization Development

Findings indicate that defenders place a greater emphasis on human resource type OD interventions such as setting goals and performance appraisals as well as an emphasis on individual level OD interventions. These findings are related to findings by Youndt et al. who report that defender types focused more HRD administrative tasks such as policies and procedures rather than more comprehensive level HRD issues. The findings are also consistent with Schuler and Jackson's (1987) report that defender types focus more on individual activity and have a shorter term focus when compared to other business strategy types. Defenders also appear to have seen an increase

in HR process type interventions, which is related to Fiedler, Teng, and Grover's (1995) finding that defender types are using more business process and redesign (BPR) focused on interfunctional processes.

Analyzers seem to place a greater emphasis on strategic type interventions such as analyzing what products/services to provide and how to transform the environment, and an emphasis on organization level interventions. This finding appears to be related to Schuler and Jackson (1987) finding that analyzer types were found to have a longer term focus and higher commitment to the goals of the organization when compared to the other types of training. This may be due in part to the high degree of total quality management initiatives that seem to have impacted the implementation of the analyzer business strategy. Total quality management philosophy requires that all levels of employees actively participate, and that each job has an explicit connection to the goals of the organization.

In addition, it appears that prospectors place a greater emphasis on HR process type interventions and group or team level interventions. This finding seems directly related to findings by Schuler and Jackson (1987) that indicate prospector types require a high level of cooperative, interdependent activity associated with work that requires close interaction and coordination between people. Prospectors also appear to have seen an increase in HR process and technology type interventions, which is consistent in part with Chaya's (1995) finding that a strong relationship exists between high information technology spending and differentiation through innovation.

Overall Relationship Between Business Strategy and the HRD Function

The data indicate that out of the three business strategy types, defenders have the fewest HRD dollars per employee, analyzers have more HRD dollars per employee than defenders but less than prospectors, and prospectors have the most HRD dollars per employee. Several findings from previous research are consistent with these findings. For instance, Jackson et al. (1989) found that defender types have fewer hours of training than other business strategy types and Schuler and Jackson (1987) found that defender types have minimal levels of employee training and development. Jackson et al. (1989) found that prospector types have more total hours of training and a greater percentage of employees received training than in other business strategy types. Torraco and Swanson (1995) state that knowledge drives product innovation and employees are carriers of that knowledge. Perhaps prospectors have grasped this concept and applied it to achieve their business strategy focused on innovation.

It appears that a strong relationship exists between certain HRD practices and business strategy. The following eight HRD practices seem to have the strongest relationship to business strategy: 1) HRD dollars per employee, 2) percentage of training time allocated to management training, 3) percentage of training time allocated to team training, 4) percentage of training time allocated to customer service training, 5) percentage of training allocated to line workers, 6) percentage of training allocated to middle managers, 7) percentage of training allocated to professionals, and 8) percentage of time spent on strategic OD interventions.

Contrary to much of the literature that presents "best practices" in HRD, findings from this study indicate that the best or most effective HRD practices are not necessarily universal across all companies, but rather seem strongly dependent on the chosen business strategy of the firm.

Significance of the Study

This study provides information to businesses and HRD professionals alike on the current status of the relationship between organizational business strategy and the HRD function. By doing so, the study provides current information to organizations with similar business strategies on the linkages that exist between business strategy and the HRD function. The study also provides companies attempting to change their business strategy with information on how they might position their HRD function to achieve their goal.

The results show how some of the top U.S. companies are positioning their HRD resources to provide the knowledge and skills necessary to gain or maintain a sustainable competitive advantage in relation to their chosen business strategy. In addition, this study provides HRD practitioners with insight on types of programs, money spent on programs, and the level of programs that companies in different business strategy groups are using to develop their employees. The results of this study help organizations and the HRD function, specifically, understand how business strategy and the HRD function relate within the overall system. HRD professionals should be better able to understand, justify, and improve the nature of their function in relation to the competitive position of their organization through the relationships found in this study, thus making a necessary step towards developing human capital in a way that truly advances the competitiveness of the organization.

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Conflicts That Arise in Small Group Facilitation: A Descriptive Study of Accounts, Actions, Outcomes, and Assessments

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The purpose of this article is to report and discuss the types of conflicts that arise in small group facilitation. Data were taken from self-report accounts contributed by facilitators who are members of the International Society for Performance Improvement. Verbatim accounts of conflict situations are cited, relevant literature on small group conflict is reviewed and discussed, and suggestions for future research are offered.

Keywords: Facilitation, Teams, Conflict

With today's organizational emphasis on teamwork, there is an increasing interest in and need for small group facilitation. There is little understanding, however, of what facilitation is or what facilitators actually do. Frey (1994, p. 4) offers this definition of facilitation, "any meeting technique, procedure, or practice that makes it easier for groups to interact and/or accomplish their goals." Meeting procedures are defined by Poole (1991, p. 55) as, "set of rules or guidelines which specify how a group should organize its process to achieve a particular goal." Thus, small group facilitators are individuals who help group members improve group process in order to expedite goal accomplishment. To improve group process, the facilitator needs to have an understanding of how groups operate.

The dual needs of small groups were first recognized by Bales (1950) who labeled the two needs task and social-emotional. Schein in 1979 and later in 1987 applied Bales' work to human relations training and process consultation. He specified that task or content is the work that is to be done by the group. Task process focuses on ways of getting the job done. This includes such things as setting an agenda, the use of decision-making and/or problem-solving techniques, and time management. Maintenance process focuses on ways of getting the group's psychosocial needs met and the development of satisfying relationships among group members. Maintenance includes such things as levels of participation, power issues, dealing with dysfunctional members, and setting appropriate norms of behavior. Almost fifty years after Bales' work, task and maintenance functions still are recognized as central to group functioning. Reddy (1994) suggests the following questions be asked by the facilitator: "Is the group operating effectively? Is the group running efficiently? Are members satisfied with what they are doing and how they are doing it?" (p. 29).

A wide body of academic literature on small groups exists. For a review of recent studies, see Bettenhausen (1991). This literature is rife with research on the efficacy of a variety of decision-making techniques (e.g., brainstorming, Delphi, nominal group). Many of these studies were conducted on student samples in laboratory settings (see, for example, Burleson, Levine, & Samter, 1984; Hirokawa, 1985; Jablin, 1981; Jarboe, 1988, Miner, 1984). More recent attention has turned to the study of small groups or teams in organizations (e.g., Ancona, 1990; Brooks, 1994; Gersick, 1988; Glaser, 1994; Hackman, 1990; Hirokawa & Keyton, 1995; Jackson, May, & Whitney, 1995; Kolb, 1995; Larkey, 1996; Larson & LaFasto, 1989; Seers, Petty, & Cashman, 1995; Stevens, 1994). Conflict in small groups has been the focus of numerous research studies (e.g., Appelbaum, 1992; Coman, 1996; Hall & Wallace, 1996; Kirchmeyer & Cohen, 1992; Kochery, 1993; McRoy, 1996; Pace, 1990; Pelled, 1996; Pelled & Adler, 1994; Rybak, 1997; Valacich & Schwenk, 1995).

The study reported here adds to the literature by describing what facilitators actually do to handle conflict situations that arise in facilitated organizational groups. Accounts of facilitation challenges and/or problems were collected from facilitators as part of a larger study designed to analyze the behaviors and competencies of small group facilitators in organizations. Since the number one challenge or problem reported by respondents was handling conflict, the focus of this article is an analysis and discussion of the types of conflicts that occur in small groups, how facilitators handle these conflicts, the results of their efforts, and how facilitators would change or not change the way they handle similar conflicts in the future.

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Research Questions

RQ1: What types of conflict situations were described as challenging and/or problematic by small group facilitators?

RQ2: How were these conflict situations handled by facilitators and what happened as a result of the facilitators' actions?

Methodology

Sample

Letters and questionnaires were mailed to 304 members of the International Society for Performance Improvement requesting their participation in a small group facilitation study. Sixty-three individuals who indicated that they facilitated small groups participated in the study. Of these, 68 percent described themselves as human resource development professionals; the remainder listed a variety of job titles, such as industrial psychologist, program development specialist, training and development manager, performance technologist, instructional designer, and teacher.

Three-fourths of the participants worked in the following industries: manufacturing, 19%; transportation / communication / utilities, 14%; government / armed services, 11%; finance / insurance / real estate, 10%; and other services, 21%. The remainder came from a variety of industry categories. Industry size breakdowns were as follows: below 100 employees, 24%; 100 - 499, 7%; 500 - 1999, 19%; 2000 - 4999, 10%; 5000 - 9999, 11%; 10,000 and above, 29%.

Procedure

Participants furnished demographic information and responded to the following four-part question:

If you have facilitated small groups, answer the following questions:

A. What was the most difficult small group facilitation challenge or problem you have ever faced? (Describe situation. Do not list names of individuals, though you may list job titles.)
B. What did you do? (Explain.)
C. What happened as a result of what you did? (Describe the consequences of your actions.)
D. If you were faced with exactly the same problem again, how would you handle it? Why would you handle it that way?

Eight participants either left the question blank or wrote illegible responses. The remaining fifty five responses were coded using thematic analytic methods of transcription--looking for "recurring regularities" in the data, and sorting the regularities into categories that "dovetail in a meaningful way" (Patton, 1980, p. 311). The following decision rules were adopted for the coding: (1) the entire response (A - D) would be the unit of analysis, (2) each response would be coded under only one primary theme, 3) in the case of two of more issues running throughout the response, the facilitator's response to Item D would be used to decide on the primary theme. All situations were able to be coded using this procedure. Issues mentioned in the responses, but not identified as primary themes, were coded for further analysis and noted for discussion purposes. The responses coded under the two primary themes of Internal Conflict and Dysfunction/disruptive group member(s) are the ones reported and discussed in this paper.

Results

In this section, a description is given for each of the two themes, followed by four verbatim transcripts of responses coded under that theme, and a brief summary section. Relevant issues stemming from the examples are discussed in the following section.

Internal Conflict

This code was used for situations in which disagreements and/or discord among group members appeared to be the primary issue. The conflict could be issue- or relationship-based; however, it needed to concern all or most group members and be relevant to the project at hand. Quarrels between just two individuals that were not described as being relevant to the entire group were coded elsewhere (under Dysfunctional/Disruptive Group Members).

Example 1:

A. Groups who need to work together but do not want to because they have issues or problems w/other group members
B. Press the group on what they want together. Determine if there is a goal they all think is important
C. They decided they cared more about the longer range goal than short term conflicts

1. I would spend more time w/ each group member individually before convening the larger group, helping them be clear about their personal goals & shared goals

Example 2:

A. Re: Planning diversity training. Negative attitudes about the subject expressed by 1/2 of group. Belief that we could not & should not undertake this project. All staff members: 3 female, 3 male; Positive side 2 female, 1 male; negative side 2 males, 1 female. The positive and negatives began to argue.
B. Called for a short break – When mtg. resumed recapped situation, "I hear that you have some concerns . . ." – Asked several questions to clarify what the real issue was-discovered that the negative members are left brained & needed more information.

1. Both sides have a better understanding of the needs of the other group – Provided more info, reassured group of my confidence in their abilities – Brought in other trainers to provide skill based instruction in the areas of concern-(i.e. conflict management & facilitation)
2. I would ask for more information-I would ask what information/resources I could provide – I tend to try to solve problems before I know the root cause. – I believe if I ask questions & let the group talk I will more likely be able to steer the group to a win-win. BFR, I would start talking & counseling.

Example 3:

A. Dealing with disputing factions

1. Clarified the perspectives of the different parties. Then asked the whole group what direction they wanted to pursue and guided them to some resolution
2. There was agreement to disagree on some of the fine points of their dispute and consensus on continuing the process to develop something that would satisfy everyone
3. About the same thing, but I might stay out of the process even more

Example 4:

A. Dealing with conflict among team members
B. Helped focus group on conflict to try to get an openness; handled individual conflicts outside of the group where necessary by getting individuals to talk w/ each other

1. Got some agreement but not all from different participants
2. Force individuals to face issues earlier. Things lingered too long.

Summary

Under the theme of Internal Conflict, the facilitators helped the groups do the following: clarify issues, focus on goals and identify common areas of interest, and participate in a full discussion. Additional issues raised by these examples include: (1) under what conditions do facilitators meet privately with individuals? and (2) what is the facilitator's role in dealing with a group's lack of information on the issues?

Dysfunctional/disruptive Group Member(s)

In contrast to the first identified theme, Internal Conflict, situations under this code involved either one or two dysfunctional/disruptive individuals whose behavior was detrimental to the group. When the situation involved two individuals, the argument appeared to go beyond what would be expected of two colleagues disagreeing on a work-related matter.

Example 1:

A. A very disruptive person stated their issue (which was off the topic) and would not move on.
B. Put on an issue chart/parking lot. And forced the issue to the side. The person would not quit venting.
C. Review with the person & the V.P. they report to.

- Same way-would intervene even more quickly

Example 2:

A. A very junior member of the team with no trust in the process – Used "they" all the time.
B. Tried to keep group focused on the problem & process – I got sucked in by getting irritated at the person (oldest error in the book!)

- Individual dropped off the team due to pressure from other team members who were equally irritated.
- Next time: Establish ground rule up front to – only speak for yourself – avoid using "they"-use data

Example 3:

A. Overt arguments between participants. Two people hotly disagreed on a subject. One left the room and refused to come back.
B. Immediately had the group take a break. Talked to both people separately, then together.
C. They reached an "operating agreement" to be civil during the group sessions.
D. Try to step in earlier to prevent what happened. The group got nervous & then gossip started on the breaks

Example 4:

A. Open conflict between group participants
B. Moved toward a break in group session, then confronted the problem in a private setting with individuals involved to resolve the conflict or terminate their participation.
C. Conflict was eliminate in the session but further private session were need to solve the problem.
D. I would handle it the same way with a similar group size. (more than 10 participants). I believe it is counter productive to involve all participants in conflict resolution. If they were not a party before hand.

Summary

In dealing with dysfunctional and/or disruptive member(s), facilitators attempted to refocus; two talked to disruptive individuals privately during break time. All seemed to agree that immediate steps were necessary before behavior negatively affected the group. One issue raised is the same as was previously identified under the theme of Internal Conflict: (1) at what point do you talk to individuals privately? Additional issues are: (2) at what point do you talk to a group member's boss, and what are the ethical considerations related to this? and (3) how does the facilitator's reaction to conflict (e.g., the facilitator becoming irritated in Example 2) affect the group?

Discussion

Participants in this study were asked to focus on "the most difficult small group facilitation challenge or problem you have ever faced." In this context, issues related to dealing with conflict emerged as the number one challenge and/or problem cited by small group facilitators. If the Dysfunctional/disruptive Group Member(s) and Internal

Conflict categories are combined (since both deal with conflict in one form or another), 36 percent of the incidents described by participants in this study were related to conflict. Before concluding that conflict is rampant in facilitated groups, however, it is important to note the small size of this sample and the wording of the study questions.

Although the word "conflict" often has a negative connotation, disagreement among group members can improve a group's decision-making. Janis's (1983) often-cited work on groupthink found that highly cohesive groups suspend critical thinking and adopt proposed solutions too quickly. Schwarz (1994) states, "How a group manages conflict will affect its ability to solve problems, be creative, and to integrate the different interests of group members with the demands placed on the group" (p. 24).

Before deciding that a conflict is "good" or "bad" then, it is necessary to look at the nature of the conflict. Sources of small group conflicts have been classified as substantive, procedural, and affective (Putnam, 1986). Substantive conflicts involve disagreements over members' ideas and group issues. Procedural conflict is disagreement among group members about the methods of process that should be followed by the group in accomplishing a goal. Affective conflicts involve people's feelings and the way members relate to each other.

Substantive/Procedural Conflicts

Differences of opinion about task issues (substantive/procedural conflicts) are considered healthy and can lead to improved performance (Ross, 1989). Having members participate in the development of a set of norms of acceptable and unacceptable behavior is one way to set the stage for positive group interaction (Schwarz, 1994) and discourage personal attacks. An example of a ground rule related to conflict is, "Criticize ideas, not people." Examples 2 and 3 under Internal Conflicts are examples of substantive/procedural issues. The facilitators in these cases attempted to increase information flow and clarify the perspectives of the different parties. Jandt and Gillette (1985) would agree that people in conflict situations should be encouraged to move away from polarized, single-issue positions and toward an understanding of the complexity of conflict. In other words, there is rarely just one right way to approach a situation. When multiple issues and alternative approaches are uncovered, there is greater chance for group members to make a decision that is agreeable to everyone. Groups often try to make decisions with insufficient information (Gouran, 1986; Kolb, 1996). That, in itself, may cause frustration and conflict as members form perceptions and make assumptions based on insufficient or erroneous information.

Affective Conflicts

Affective conflicts involve emotional battles that may or may not need to be resolved in order for the group to accomplish its purpose. Facilitator attempts to resolve such conflicts are sometimes called maintenance process interventions (Reddy, 1994) or deeper-level interventions (Schwarz, 1994). According to Schwarz, an interpersonal conflict situation between group members that keeps the group from accomplishing its goal would be classified as a Level 3, Instrumental intervention. In this case, the facilitator might ask the group, "Exactly what did members do in working with each other that led to not accomplishing the goals?" (Schwarz, 1994, p. 113). The extent to which group members should be involved in any attempted resolution of these conflicts depends on factors such as the purpose of the group (specifically whether one of the purposes of the group is to also improve its process), the skills of group members, time available, and the skills of the facilitator (Reddy, 1994; Schwarz, 1994). Facilitators may decide, as was the case in several situations cited in this article, to talk privately with individuals. In the case of substantive and/or procedural conflicts, however, group members should be involved since the conflict is related to the task. Interventions at Level 4, Interpersonal and Level 5, Intrapersonal, according to Schwarz (p. 113), involve such facilitator questions such as "How do you feel toward Joe and Bob when this happens?" and "Bob, why do you think you end up in conflicts more frequently than other group members?" Level 5 interventions, in particular, delve into emotional areas that are beyond the scope of most organizational facilitation situations and the skills of most facilitators.

An additional issue that emerged from the examples related to conflict is the extent to which facilitators report to management the results of a facilitation effort and/or process issues that might arise during a group meeting--e.g., Example 2 under Dysfunctional/Disruptive Member(s) where the facilitator reports the dysfunctional individual to his/her manager. Did the member know that this might occur? Questions of loyalty, trust, and credibility are involved in such decisions. Keyton (1994) and Seibold (1994) both raise questions about divided loyalties related to the conflict that may arise between the interests of management and the interests of group members. Whose interests must take precedence?" What about individual privacy rights when the facilitator decides that the group

should discuss why one person always ends up in conflict? Questions like this seem to make a further argument against facilitators becoming involved in Level 5 interventions.

It is interesting to reflect on how a facilitator's personal views and comfort level with conflict might affect the climate of the group, the group's approach to handling conflict, and the facilitator's own view on the disruptive nature of conflict. For example, a facilitator who is very uncomfortable with conflict of any kind might keep the group from fully discussing substantive issues that are essential for the group's success by intervening at the first sign of disagreement. Alternatively, a facilitator who enjoys "stirring things up" might encourage a level of conflict that is inappropriate given the purpose and culture of the group.

Contribution to HRD

Facilitators deal with a variety of issues and process concerns. The more information they have relevant to these issues and concerns, the better equipped they are to help groups improve their process and complete their tasks. This study is one step toward providing that information. In terms of future studies, research that sheds light on how facilitators and members might positively deal with conflict in task groups would be useful. Additionally, quantitative and qualitative studies that focus on the behaviors, skills, competencies, and concerns of facilitators working with groups and teams in organizational settings are needed.

Results of this study have implications for facilitator training. Training programs that include role plays and discussions of small group conflict situations would allow facilitators to practice and receive feedback on a variety of conflict management strategies. Pairing trainees with experienced facilitators for on-the-job training is another way for novice facilitators to develop skills.

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A Test of a Rapid Developer Model: Workplace Factors Associated with Learning and Development

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The author constructed a literature-based "rapid developer model" that identified the work environment factors that could be expected to be associated with rapid development. The author then conducted an empirical test to determine the extent to which the model was supported in actual experience. The main hypothesis that employees identified as "rapid developers" by management would report differences from the comparison group was not supported. However, when employees themselves identified other employees as rapid developers, differences as predicted by the model were consistently discovered.

Keywords: Organizational Learning, Work Environment, Organization Changes

Introduction

How quickly individuals learn and develop new knowledge, skills, and mindsets directly contributes to performance. In fact, speed may well be the critical source of competitive advantage (Stalk & Hout, 1990). In order to flourish, people and organizations must learn to adapt faster and faster or be weeded out in the economic evolutionary process.

Three elements affect how quickly individuals learn and develop in organizations. The characteristics of the individual, the quality of the learning intervention, and the elements that compose the work environment have all been shown to impact the transfer of learning from formal setting to the job (Baldwin and Ford, 1988). All three of these must be considered both from the standpoint of their individual merits as well as from the effects of interaction among each other.

Analysis of learner characteristics and evaluations of effective learning interventions have been studied extensively, while very little research has examined the impact of workplace factors on learning. This is in spite of the fact that the role of the work environment has been speculated to be the most important contributor to how quickly learning and development occurs. Experts have estimated that factors in the workplace may well account for 80 to 85% of problems associated with learning and performance (Deming, 1982; Rummler & Brache, 1990); however, more empirical support is needed for the views of these authors.

This paper explores the work environment's role in how quickly people learn and develop in organizations undergoing significant change. First, a "rapid developer" model is presented. Next, the findings of an empirical test of the model are reviewed to determine the extent to which the rapid developer model was supported in actual experience. Finally, implications are explored and ideas offered for researchers and practitioners interested in improving the quality and the speed of learning.

Model Development

The literature on learning and development is distributed across a number of fields of study. The author reviewed the literature pertaining to workplace learning and development by experts in, performance technology, training, total quality, organization learning, and organization culture.

Quality experts Deming (1982) and Juran (1995) both state the critical importance of management providing a work environment with the correct elements in place for all employees to do their job well. The work environment factors of data, instruments, and incentives (Gilbert, and performance specifications, task interference, consequences, and feedback (Rummler & Brache, 1990) been proposed by performance technologists as the most critical elements to address in efforts to improve learning and performance. Tannenbaum and Yukl (1992) in their review of the training literature also provide evidence of the significance of both the pre- and post-training environment in transfer of training. For example, the presence of rewards and job aids encourage the application of new knowledge and skills, while lack of appropriate tools (such as necessary equipment) prohibit application. Later research demonstrates that social and goal cues, positive feedback, negative feedback, punishment consequences, extrinsic reinforcement consequences, intrinsic reinforcement consequences all have direct effect on post-training

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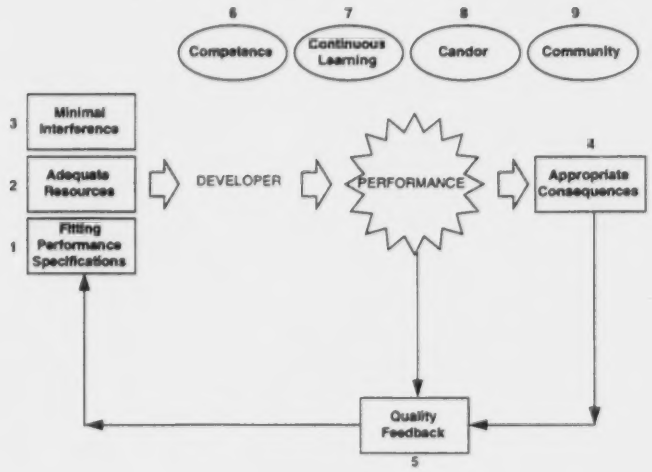
behavior (Tracy, Tannenbaum, & Kavanaugh, 1995). A common characteristic of the above factors is that all of them are under the immediate and the direct control of management.

Other workplace factors associated with learning and development uncovered in the literature review stem from the organization's culture. Culture is the set of shared, taken-for-granted, implicit assumptions that a group holds and determine how it perceives and reacts to various situations (Schein, 1992). Significant learning, (what Argyris and Schön (1997) call "double-loop learning," or what Juran (1995) terms "breakthrough") must address the culture by modifying the underlying norms, policies, and objectives of the organization.

Numerous cultural factors have been identified as contributing to learning and performance. What the authors describe as a continuous-learning culture (social support, continuous innovation, and competitiveness) had direct effects on post-training behavior (Tracy, Tannenbaum & Kavanaugh 1995) and job performance (Martineau, 1995). It has been postulated that in order to achieve organizational excellence, learning, competence, and justice must be an everyday part of the organization (Argyris 1990), and all members of the organization must begin struggling with a new level of self awareness, candor, and responsibility (Argyris 1994). Finally, and most importantly, it has been demonstrated that culture can have a major effect on an organization's long-term economic performance (Kotter & Heskett, 1992).

However, culture is the result of actions that take place over many years. Members of the culture will resist any and all efforts that they feel attack "their way of life" and efforts to change it in the short-run usually fail (Juran, 1995; Kotter, 1996). Since learning demands change and culture abhors change, the challenge then is to develop, over time, a culture that both embraces (and holds constant) learning and change (Schein, 1992). It is the primary role of the leader to create such a culture.

Figure 1: Rapid Developer Model



Based upon the commonalties discovered in the review, the researcher created a nine factor model which identified and defined the contextual factors that could be expected to be associated with rapid development. Five "situational factors", that appear to be under the immediate and direct control of management, and four "cultural factors", that are the product of leadership activities often formed over the course of years. Figure 1 displays the Rapid Developer Model.

Situational Factors

1. Fitting Performance Specifications

The fitting performance specifications factor is a central element of the work environment. The underlying rationale is that the better people understand expectations, where they come from, and why they are important, the better people will perform. This factor is present when performance specifications are clear, realistic, align with other expectations, and support the business strategy.

2. Adequate Resources

People need resources to meet the expectations of their jobs. Ideally, these resources should be available immediately whenever needed and packaged appropriately to productively complete required tasks. This factor is present when performers have the following resources when they need it: information, staffing, time and the appropriate tools.

3. Minimal Interference

For people to exhibit new behaviors, the proper steps must be in place that support their work efforts. Anything that interferes with people performing priority tasks must be eliminated or at least minimized. This factor is present when job procedures and workflow are logical for the new tasks, there are ample opportunities to perform new tasks, and the tasks can be done without interference from other tasks.

4. Appropriate Consequences

Consequences play an important role in the achievement of expectations. Along with the intrinsic consequences that the individual brings with him or her to the job, extrinsic consequences that impact behavior are found in the work setting. The appropriate positive consequences reinforce desired behavior while the appropriate negative consequences stifle undesired behavior. This factor is present when consequences are aligned to support the newly desired performance, aligned with other performance expectations, timely, and meaningful to the performer.

5. Quality Feedback

Feedback is important for individuals to gauge their performance in respect to goals and expectations. Feedback is especially important when people are experimenting with new behaviors. Quality feedback reinforces desired behavior and reduces non-productive behavior. This factor is present when feedback is relevant, accurate, timely, specific, and easy to understand.

Cultural Factors

6. Competence

Organizations can no longer tolerate individuals who do not contribute to the success of the enterprise. Politics can not be considered more important than performance in measuring employee value. Although hard work is often still seen as both admirable and desirable, it is being placed secondarily behind smart work that produces the same or greater results with less effort. This factor is present when: results are valued more than hard work, performance is more important than political connections in getting recognized and rewarded, individuals take personal responsibility for their actions, and there is tolerance of unusual style or behavior of the people who do good work.

7. Continuous Learning

Continuous learning is an organizational mindset that recognizes and values the need for both incremental gains and brand-new innovations by all organization members. Mistakes are not only tolerated but expected as a natural part of learning. This factor is present when: both continuous improvement and innovation are valued,

methodologies are present to support them, systems are in place to capture, store, and transfer knowledge, and quality failure is acceptable.

8. Candor

Candor is present in organization culture when people routinely question and challenge the unsupported talk and actions of all individuals whatever their rank or base of power. Organizational candor means that truth is much more important than saving face and that trust evolves through open and honest dialogue and reflection. This factor is present when: people are frank even when ideas directly confront those of superiors, people challenge the unsupported talk and actions of others, and people routinely stop to reflect about what they are doing and why.

9. Community

In a time of major change, people need the support and fellowship of other individuals at work. Shared commitment helps individuals to take risk knowing that others will help them. This factor is present when: people routinely support individuals who ask for help, people think of their roles in terms of the larger organization, and people are involved in change efforts and feel they can influence what happens.

Hypothesis

The hypothesis developed to test the credibility of the model was that rapid developers perceive more work environment factors are present than not-rapid developers. If the evidence supports this hypothesis, the case could be made that the work environment plays an important role in the speed of learning and development and the model is a useful tool in helping to determine rapid developers.

Methodology

Three organizations undergoing significant organizational change in which important learning interventions were occurring were chosen to participate in this study to test the rapid developer model. Populations from which research respondents were drawn were sales, service, and first-line supervision. Through personal and telephone interviews, extensive background research was conducted by the researcher to understand the organization history, context of the change, issues being addressed, details of the learning intervention, and new expectations of the target population.

A detailed process was put in place by the researcher to develop a criteria for rapid development specific to each organization. With researcher guidance, managers from the three organizations learned about rapid development and discussed the implications for their organization. A rapid developer was defined for the managers as "someone who has learned new information and exhibited new behaviors relevant to the changes quicker than other individuals. Ideally, these changes in behavior lead to results that align with the new expectations." The researcher emphasized that today's rapid developers are not necessarily today's top performers.

The group was then asked to list behaviors that would represent rapid development in their specific situation. Next, the managers were given a list of all the individuals in the population being studied and asked to identify the 10 individuals whom they thought were the most rapid developers from the start of the change intervention till the day of the session. Managers presented their choices giving examples of behavior to support their selection. The researcher facilitated the groups to discuss and come up through consensus a final list of 10 rapid developers. Random samples from the remaining individuals in the population were selected to act as a comparison group.

Early in the study, a design concern arose concerning the participating organization management's ability to identify rapid developers. This was first made evident during the gathering of background information and confirmed during the facilitation of the nomination of rapid developers. Managers, at least in these three organizations, are not accustomed to thinking about learning and development behavior nor monitoring developmental behavior outcomes. Managers may not have acquired the rational evidence needed to make valid judgments about who among their reports are rapid developers. Therefore, an additional source for nominating rapid developers was sought. It was postulated that the actual members of the population under study could accurately identify rapid developers based upon their first-hand experience. For these reasons, prior to actual implementation, a

"reality check" was integrated into the study with a question added to the interview in which all research respondents were asked to nominate their own list of rapid developers from the population under study.

An individual from each participating organization took the names of the 10 rapid developers nominated by management and the 10 individuals selected at random and faxed them to the interviewer. Individuals were not identified in any way. The interviewer was familiar with the general focus of the research but unaware of the research hypothesis or the specifics of the study design. Following the same questioning guidelines, extensive telephone interviews of the research respondents averaging about 30 minutes in length were conducted to learn their perceptions of the work environment factors purported by the research model to impact the speed of learning and development. All 58 interviews (two individuals were contacted but never interviewed) were recorded and transcribed word-for-word substituting names with codes.

Using the software program HyperResearch as a sorting tool, the researcher read each interview transcript, coding relevant comments into one of nine categories each representing a model factor. Rereading the comments relevant to a specific category, the researcher scored each of the nine factors as either being "present," "not present" or "not able to tell" for each participant. The "not able to tell" was chosen when either the participant stated that he or she did not know the answer to the question asked, the appropriate question was not asked, or the answer was ambiguous. Prior to conducting the research, certain questions were chosen to be the main determiners of the presence or absence of a factor. For example, here are the questions asked to learn about each respondent's perception of the fitting performance factor: "What are ___ expectations of you?" "What else?" "Any other expectations?" "It sounds like lots of things have changed these past ___ years. Which of these expectations are different than in the past?" "How so?" "Any other changes in what you are supposed to do?" "Are these new expectations clear?"* "Why do you say that?" "Are the new expectations realistic?"* "Say more". "Who was involved in determining these new expectations?" "How?" "What's the reason for all the changes any way?" For the researcher to consider this factor present for the respondent, positive responses were needed for each of the two asterisked questions. A similar approach was used for all nine factors.

At a later point in time, the researcher sorted the data by category. Not referencing the earlier analysis, the researcher read through the data by category and again scored each factor as present, not present, or not able to tell. The researcher then compared the two analyses finding a discrepancy rate of 8%. The researcher investigated each discrepancy by re-examining the sorted information as well as reading the entire transcript in question again to determine a final score.

Before learning which research participants had been selected by management or respondents as rapid developers, the researcher ranked respondents by the total number of factors perceived present and predicted that the top 10 individuals from each participating organization were the rapid developers. The researcher recorded the codes to these ten respondents in a memo and sent it to the organization sponsor before learning the organization's predictions of rapid developers.

Results

Table 1 demonstrates how well the model holds up when manager-selected rapid developers are compared to a randomly-selected group. The left-hand column labeled "category" shows that there were 28 individuals in the rapid developer group and 28 individuals in the comparison group for a total of 56 respondents. The next column to the right shows the counts and the percentages of the comparison groups by factor. For example, 48%, or 13 or 27, of the manager-selected rapid developer group, perceived that the Fitting Performance Specification factor was present. 50%, or 14 of 28, of the randomly-selected comparison group felt that the Fitting Performance Specification was present. This approach is used for all factors with the column at the far right providing totals for the rows.

The third row shows the column totals representing the overall average perception of all research participants combined. For example, scores ranged from a low of only about 12% of all respondents feeling that the Candor factor was present in their work environment to about 93% of all respondents feeling that the Community factor was present. Overall, the individuals interviewed felt that about 53% of the workplace factors were present in their work environment.

Logistic regression was chosen as the inferential statistics tests as it is appropriate both for the testing of categorical data as well as dealing with the multiple variables under analysis. The logistic regression test analyzes whether the proportion of factors present is greater for one group than another. Therefore, the null hypothesis was that there is no difference in the proportion of factors present between manager-selected and the comparison group. Statistics confirm what is visually apparent, there are no differences between the manager-selected and the randomly-selected comparison groups. The logistic regression analysis reveals a probability of 0.52. A probability of

less than .05 is necessary to reject the null hypothesis. Hence, the null hypothesis in not rejected and the model is not supported when managers select the rapid developers.

Table 2 shows counts and percentages for the respondent-selected rapid developers versus a comparison group. The respondent-selected group is composed of the 13 individuals selected by respondents as rapid developers who were actually interviewed. The comparison group consists of the remaining 43 individuals interviewed who were not selected as rapid developers by research respondents. Review of the data shows that respondent-selected rapid developers show more presence than the comparison group on all nine of the work environment factors. The logistic regression test was again used to look for differences between these two groups. In this case, the null hypothesis was that there is no difference in the proportion of factors present between the respondent selected and the comparison group. When making this comparison, the logistic regression analysis displays a probability of 0.03 with a positive parameter estimate. Thus, there is a difference between these two groups and the model is supported when respondents select the rapid developers.

Conclusion

Assuming that managers did not know who the rapid developers were and the peer group did, the data show that the presence of workplace factors are associated with rapid development. These research findings provide needed empirical support for the thinking of theorists, the research-to-date on the work environment, and the experience of practitioners. An enabling work environment appears to be vital to learning, change, and performance. If the results of this study are representative of what would be found in other organizations, then these findings help provide rationale for: (a) why major organizational change is so difficult, takes so long, and often fails; (b) why individuals undergo such stress, frustration, and great difficulty in adapting to major change; and (c) why the return on training and other learning interventions is typically so marginal.

However, the findings also present a major opportunity. On average, the data show that the organizations participating in the study were operating at about 50% of their desired level of performance regarding workplace factors associated with learning and development. The opportunity to close this gap provides a performance improvement potential of 100%. Focusing management resources on improving the work environment can provide an excellent learning and performance ROI. If additional research continues to support these findings, it would support several recommendations that can be made at this time.

Fix the Work Environment First. In two of the three organizations, senior management strongly stated their commitment to dramatic change in the operation of their organizations. Great emphasis had been placed upon providing whatever resources were required including large amounts of training and other learning interventions to all members of the populations under study. However, after one and two years respectively, results had not met senior manager expectations. Although these executives strongly espoused the business need for rapid learning and development, none had taken steps specifically aimed at addressing the work environment. In light of the limited presence of overall work environment factors, the principle of fixing the learning environment before addressing the specific needs of the learner (Gilbert, 1978; Rummler & Brache, 1990) gains credence. The data suggest that management efforts aimed at first clearly understanding, defining, and communicating each of the model factors in light of the organizational changes could speed learning and performance.

Provide Managers with the Information They Need. Although the concept of rapid development was readily confirmed as being extremely significant, the construct of rapid development specific to any of the organizations had not been developed. No definition existed, no goals were in place, no measures upon which to compare and improve were available. When management determined a clear definition of what rapid development should look like in their organization, they had very little data upon which to make selections. Without the appropriate information, management was out of touch and therefore unable to identify rapid developers nor able to provide the appropriate managerial support necessary to accelerate the learning process. Educating managers about the significance of the work environment regarding change, learning, and performance, then defining and operationalizing rapid learning and development relative to their organization can help provide managers with the necessary information required to guide, monitor, and support organization change.

Use the Model as a Change Tool. The model may have use at several points whenever organization change is occurring and subsequently learning and development is important. The model may be used at the onset

of a change intervention to evaluate organization readiness. The findings can be used to increase management's awareness of the work environment relevant to learning, its importance in the change process, and assess areas of strength and concern. It can also postpone the seemingly ever-present urge to hurl training immediately at all concerned.

For example, a task force of individuals targeted for the change can be armed with the model and charged with determining the status of the current work environment and suggesting changes to make it supportive of the new expectations. If the model is supported by further research it could also be used to measure progress by reassessing the work environment during the change. This will give information toward successes and challenges as well as help focus remedial activities and improve on-going efforts.

Expand the Research Base. This research is a case study which includes only the information from three organizations. Replicating the research with more organizations makes sense as a first step. Other proofs of reality (beyond perceptions) would add to the strength of the findings, especially since the concept of rapid developers is not common to current thinking. Using techniques similar to observation of exemplar performers (Gilbert, 1978), observations of both rapid and not-rapid developers would help to compare and contrast behaviors of thinking, doing, and reflecting. In addition, it would be helpful if future studies included some performance measurement to link learning and development to outcomes. Finally, this study is limited to exploring the work environment's role in how quickly people learn and develop in organizations undergoing significant change. Studies able to address both the work environment and the characteristics of the learner could shed light as to how these important variables work together.

TABLE 1 Manager-Selected Rapid Developers vs. Comparison Group

Category	FACTOR 1 Fitting Performance Specifications	2 Adequate Resources	3 Minimal Interference	4 Appropriate Consequences	5 Quality Feedback	6 Competence	7 Continuous Learning	8 Candor	9 Community	Total
TOTAL FOR ALL THREE ORGANIZATIONS (56 participants)										
Rapid - 28	13/27 48%	19/28 68%	11/26 42%	11/27 41%	10/25 40%	7/20 35%	18/24 75%	4/26 15%	27/28 96%	120/231 52%
Comparison - 28	14/28 50%	19/27 70%	10/24 42%	15/27 56%	17/26 65%	8/25 32%	18/23 78%	2/25 8%	25/28 89%	128/233 55%
TOTAL - 56	27/55 49%	38/55 69%	21/50 42%	26/54 48%	27/51 53%	15/45 33%	36/47 76%	6/51 12%	52/56 93%	248/464 53%

TABLE 2 Respondent-Selected Rapid Developers vs. Comparison Group

Category	FACTOR 1 Fitting Performance Specifications	2 Adequate Resources	3 Minimal Interference	4 Appropriate Consequences	5 Quality Feedback	6 Competence	7 Continuous Learning	8 Candor	9 Community	Total
TOTAL FOR ALL THREE ORGANIZATIONS (56 participants)										
Rapid - 13	7/13 54%	11/13 85%	8/13 62%	6/12 50%	7/11 64%	6/11 54%	9/11 82%	2/13 15%	13/13 100%	69/110 63%
Comparison - 43	20/42 48%	27/42 64%	14/37 38%	19/42 45%	20/40 50%	9/34 26%	27/36 75%	4/38 10%	39/43 91%	179/354 51%

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Barriers to Transformation Change: High Performance Workplace Practices and Unionized Companies

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The purpose of this study was to identify which characteristics of high-performance workplaces as recommended by the U.S. Department of Labor's Office of the American Workplace (1994) in the categories of training, participation, organization, and partnership are being practiced at unionized companies in Wisconsin. Also examined is the relationship between the implementation level of these high performance workplace practices and the level of labor-management cooperation. The study results provide both management and union officials with research regarding the influence of cooperation in achieving economic success, in part, through the implementation of high-performance work practices involving training, participation, organization, and partnership.

Keywords: High Performance Organizations, Transformation and Unions, Labor Management Cooperation

Many of the traditional work practices initiated by unions in the 1930s and 1940s are being challenged by corporate America in the form of high performance organizations. In this new structure workers have been given greater responsibilities in their jobs as a means of reducing the decision making process. Contrary to this belief, unions and management have carefully constructed contract language known as management rights that go against high performance initiatives.

Expounding on this issue, a barrier that has limited the transformation process of organizations in moving to high-performance is management's inability to make complementary changes in managerial practices and production practices. Without such changes in management practices, the needed changes in work practices or labor relations have limited payoffs (Kochan, Katz, and McKersie, 1994). No magic formula exists for creating successful employee involvement. Nonetheless, organizations striving to tap into the resources of their workforce must build support from employees, managers, unions, and business partners (Levine, 1995). In a unionized company, changes to a high performance workplace would appear to be dependent on cooperation between management and labor.

Research Questions

The following research questions were developed to explore the following issues:

1. To what extent have the 15 high performance workplace practices as recommended by the U.S. Department of Labor's Office of the American Workplace (1994) been implemented at all or only selected manufacturing unionized companies in Wisconsin?
2. What is the relationship between the implementation level of the practices as recommended by the U.S. Department of Labor's Office of the American Workplace (1994) for the categories of strategic planning, training and human resources and the level of cooperation between union and management?

Three preconditions are required to develop employee support and capacity for employee involvement to succeed. First, workers need to be involved and given some responsibility for organizational change and daily work planning. Employees need mechanisms through which their suggestions may be evaluated and implemented. If jobs are narrowly defined and rigid, workers have less opportunity to make suggestions. Second, employees must be motivated to make improvements. While the incentive mechanisms in high-performance organizations vary widely, the objectives are to share the rewards gained from new ideas. Third, workers must be capable of making improvements. Their knowledge and skills need to be developed through training and continuous learning, and their ideas and recommendations are given consideration through information exchanges (Levine, 1995). Recent evidence shows that there has been widespread experimentation with a variety of participatory techniques and substantial

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changes in work rules. The data also shows, however, that the extent of work restructuring is often limited and piecemeal (Kochan, Katz and McKersie, 1994).

Methodology

Survey Population and Sample

The researcher contacted several sources in an effort to obtain a published list of unionized companies in Wisconsin. The sources included the U.S. Department of Labor, Washington D.C.; the Department of Labor in Wisconsin; the AFL-CIO, Milwaukee, Wisconsin; and the state senator's office in Milwaukee, Wisconsin. The researcher was told by each source that a list of this nature was not developed. A list was finally developed on the advisement of Dr. Paula Voos, University of Wisconsin. In her 1987 study, *The influence of cooperative programs on union-management relations, flexibility, and other labor relations outcomes*, Dr. Voos was able to construct a list of unionized firms in Wisconsin through the Wisconsin Employee Relations Commission in Madison, Wisconsin. Unions are required by state law to file with the Wisconsin Employee Relations Commission for "Reopener Notices" at the expiration of a collective bargaining agreement. A reopener notice is a formal document that is sent to the Wisconsin Employment Relations Commission making them aware that union and management of a specific company has opened their renegotiation process.

The information provided in this document includes the company and contact person, plus the name of the union and their representative. It also includes the number of employees in the company and the number of employees covered by the contract. It also states the principle product or service of the company.

The same methodology was used for this study, with one exception. Since the length of contracts varies from 1 to 4 years, the researcher selected reopener notices with 50 or more employees for the years 1993-1996. A total of 995 reopener notices were obtained. The reopener notices represented union contracts with labor membership employed in the job cluster of manufacturing, construction, office workers, health care, trucking, banking, and warehousing. Based on the review of literature, only manufacturing organizations were surveyed for this study. A total of 388 manufacturing companies were identified from the obtained reopener notices.

During the selection of the manufacturing reopener notices, the process revealed that union officials often represented more than one organization. The researcher determined that sending more than one survey to the same union official could lead to confusion. A total of 152 individual union representatives were identified from the reopener notices. Selection of the manufacturing organizations was done by using a computer printout that was developed for the initial list of manufacturing firms. A random sampling process was used from the computer printout to obtain 152 companies. Union representatives were then selected to match the organization they represent. A survey population of 304 was based on this process. The reopener notices provided the names and addresses of the union and the company official responsible for the collective bargaining agreement.

Instrumentation and Data Collection

A survey instrument was used to collect the data pertaining to the research questions. The instrument was developed based on research done in two previous studies. The first research study was conducted by Work in America. In this study the research was conducted by analyzing organizations that have characteristics of a high performance workplace. These studies have repeatedly found that human resources, as it reflects in the skills and commitment of the workforce, are more effective through partnerships that are focused on common goals and equal involvement of all stakeholders in policy and other decision making. The study was conducted with the help of management executives, union leaders, and academic experts in human resource management. The selection was based on members' previous involvement and experiences in new relationships that made operations, labor, and human resources management full partners in achieving and sustaining competitive advantage. As a result of this study a list of 10 key features were established which complemented the study done by the U.S. Department of Labor.

In 1993 a growing number of U.S. companies recognized that today's business environment requires them to be innovative in the way they do work. To assist companies facing these challenges of change and to educate those companies in search of becoming a high-performance organization, the Office of the American Workplace (OAW) was created in 1993 under the Department of Labor. Its' mission is to encourage good workplace practices that lead to better jobs and better business results. The Office of the American Workplace used the experiences of a large number of companies to do the research. The main thrust of the research was to identify key indicators that

companies could use in gauging their effectiveness in becoming a high performance organization. The key indicators were similar to those of the Work in America study.

Following are the 15 key indicators used in this research:

1. Workers are actively involved in redefining their jobs.
2. Workers modify their work processes to correct quality problems or procedures.
3. Workers modify their work processes to correct production problems or procedures.
4. Workers modify their work processes to correct safety problems or procedures.
5. Workers are actively involved in meeting internal customers.
6. Workers are actively involved in the selection of new technology.
7. Individuals or teams receive feedback about the workers suggestions.
8. Workers are organized into teams with substantial authority.
9. Cross-functional teams or other mechanisms are used to increase innovation across organizational boundaries.
10. The plant organization has reduced the layers of management from previous organizational structures.
11. The company and the union engage in innovative collective bargaining agreements.
12. Current training programs are explicitly implemented to support strategic plans.
13. Current training programs are developed to support continuous learning.
14. Training expenditures are distributed across the company's entire workforce.
15. Training programs are evaluated for their effectiveness.

To develop the questionnaire the researcher used the 10 work practices identified in the Office of the American Workplace. The questions were modified, since several of the workplace practices statement related to multiple points. With the modification a total of 15 statements were used in the survey. The organizational characteristics used in the survey were from a previous study done by Dr. Paula Voos, which was titled *The influence of cooperative programs on union-management relations, flexibility, and labor relations outcomes*. The researcher received permission to use the organizational characteristics.

Dillman (1978) recommended a three-step approach to pretesting. The researcher followed Dillman's suggestions for improving the survey. The first step was to send the survey to a select group of five training professionals who have in-depth knowledge of high performance organizations. They were asked to review the survey for clarity of questions and directions, as well as the layout and flow of the survey. Modifications were made on their recommendations.

The second step was to have a group of potential users of the data examine the survey instrument. Here the researcher made a modification from Dillman's recommendation. Instead of potential users, six experts in the field of high performance were selected to evaluate the survey using the same criteria as in step 1. This was done so that personnel in the survey population would not be asked twice to provide information.

The third step as recommended by Dillman (1978) is to collect pretest information from subjects drawn from the population to be surveyed. A pilot study was conducted by mailing a cover letter, the survey, a return envelope and a return postcard, which was used to identify which firms returned the survey. The pilot study included 32 of the 304 study participants, approximately 10 percent of the population. The pilot study was conducted to estimate the rate of return and to determine if modifications to the survey were necessary. Of the 32 surveys mailed for the pilot test, 22 were returned, 12 from management and 10 from labor. This represented a response rate of 70 percent. No modifications to the survey were deemed necessary.

The adjusted study population included 272 unionized Wisconsin firms (pretest participants not included). Just as in the pilot survey, those not responding to the initial mailing were contacted by phone. A total of 137 surveys were returned. In addition to the 22 surveys returned from the pilot survey a total of 159 were received from the participants representing a 52.3 percent return rate. Of the 159 surveys returned 65 came from union representatives and 94 from management.

Findings

Parts 1 and 2 of the questionnaire consisted of questions relating *to organizational characteristics*. Respondents answered the first question of union responses that were based on plant, divisions, and/or departments. as a *corporation, business unit or a division and/or a department*. There were 58.5 percent, which accounted for the greatest number of single union responses. Management's greatest single response was as a corporation accounting

for 37.2 percent. In the category of *total number of employees*, union had the greatest frequency in the category of 100-249 employees, which accounted for 29.2 percent of the responses. This was also the most frequent response for management at 33 percent. The next largest category was 250-499 employees: 21.5 percent for union and 21.3 percent for management. *The type of organization for which they were completing the survey*: both union and management had the greatest response to 'other,' which included manufacturing of hydraulics components, metal fabrication and sheet metal, union having a response of 46.1 percent and management with a response of 51.1 percent. Assembly was next with union having a response of 15.1 percent and management with 12.8 percent.

Years your organization has been involved in building partnerships for high performance: one to three years was the greatest response for union and management; 32.3 for union and 30.9 for management. Four to six years was the second largest response for union and management. Union representatives had a response of 16.9 percent for zero years of being involved in high performance, and management had a response of 8.5 percent

In the category of reasons the company had to change from its present way of doing business: the percent given for each question was based on a separate response, since more than one response could be given. Union and management both gave a major change in production technology as the most frequent response with 53.3 percent for union and management with 47.9 percent. They also gave changes in the amount of skills required by workers as their second response for change with 46.2 percent for unions and 39.4 percent for management. Major change in industrial bargaining patterns, was the third most frequent response for both union and management, union had a response of 36.9 percent compared to 14.9 for management.

Since 1992 have any of the following changed for your company? The most frequent response was international competition followed by non-union domestic firms. The last statement, *which of the following best describes your organization's strategy for achieving competitive advantages*: forty percent of the union representatives indicated that service at a lower cost than competitors was the advantage, while management had a 35.1 percent for better quality or different product as their organizations strategy.

ResearchQuestion #1: To what extent have the 15 workplace practices as recommended by the U.S. Department of Labor's Office of the American Workplace (1994) been implemented at all or only selected unionized companies in Wisconsin

Table 1 T-test was used to determine significance between union and management mean scores. Nine out of the fifteen workplace practices showed a difference existed at the .05 level. In all nine workplace practices management means were higher than the union means.

Table 1

Description of Implementation Practices in Unionized Companies in Wisconsin as Viewed by Management and Labor

Workplace Practices #	Management Mean	Union Mean	Management Standard Deviation	Union Standard Deviation	Management Median	Union Median	p
1	33.66	32.46	24.13	27.62	30	30	.08
2	53.72	44.15	26.15	27.27	60	40	.03
3	51.81	44.77	26.56	28.84	50	50	.14
4	60.53	54.31	25.58	28.34	65	60	.16
5	42.77	30.92	28.34	29.19	40	20	.01
6	38.62	30.15	26.34	26.37	40	30	.05
7	50.85	35.38	28.31	29.74	50	30	.00
8	33.09	28.46	28.06	26.47	30	20	.29
9	39.36	28.31	28.31	26.63	40	20	.01
10	49.68	28.77	33.00	27.75	50	30	.41
11	44.36	40.31	29.53	30.46	40	40	.41
12	42.87	29.85	26.87	24.65	50	30	.00
13	45.21	31.91	28.99	23.89	40	30	.00
14	50.22	29.38	31.62	27.94	50	20	.00
15	45.74	30.78	30.62	28.08	50	20	.00

Note. Management responses to all workplace practices were 45.5 percent, while labor responses were 30 percent to all workplace practices.

Research Question #2 - What is the relationship between the implementation level of the practices as recommended by the U.S. Department of Labor's Office of the American Workplace (1994) for the categories of strategic planning, training and human resources and the level of cooperation between management and labor.

Table 2

Frequency Distribution of the Implementation Level of Strategic Planning as Reported by Management and Labor

Question: To what extent has your organization followed a business strategy to develop a partnership between union and management in the following?	Management (N = 91)		Union (N = 58)	
	M	S.D.	M	S.D.
Delegating decision-making authority to the lowest level of the organization.	2.98	1.14	2.31	1.16
Mutually agreeing on organizational goals.	2.48	1.14	2.40	1.26
Mutually agreeing on organizational structure redesign.	2.25	1.11	2.10	1.07
Mutually agreeing on improved communications.	3.08	1.10	2.79	1.20
Implementing strategic plans.	2.41	1.17	2.28	1.17
Creating a shared mission and vision.	2.80	1.34	2.57	1.23
Specifying business objectives to drive training.	2.58	1.21	2.43	1.17
Providing a sustainable competitive advantage through training.	2.71	1.16	3.20	1.02

Note. Response scale 1 = no extent 2 = very little extent 3 = some extent 4 = considerable extent 5 = very great extent

Three management personnel and seven union representatives indicated "does not apply."

Table 3

Frequency Distribution of the Implementation Level of Training as Reported by Management and Labor

To what extent do the following statements reflect your union's involvement in training?	Management (N = 89)		Union (N = 58)	
	M	S.D.	M	S.D.
Developing a formal, jointly written mission statement that outlines the role of training in supporting your overall business strategy.	2.03	1.13	2.40	1.30
Assisting in developing a plan for training.	2.55	1.23	2.55	1.24
Assisting in supporting and implementing of a plan for training.	2.72	1.25	2.76	1.27
Participating in developing a training curricula.	2.53	1.27	2.52	1.27
Participating in developing standards for training.	2.38	1.23	2.26	1.22
Participating as instructors in on the job peer training.	3.01	1.32	2.71	1.36
Establishing training budgets.	1.80	1.17	1.72	.98
Giving training to supervisors (team leaders) in their new roles as a coach.	2.14	1.22	2.05	1.14

Note. Response scale 1 = no extent 2 = very little extent 3 = some extent 4 = considerable extent 5 = very great extent

Seven management personnel and union representatives indicated "does not apply."

Table 4

Frequency Distribution of the Implementation Level of Human Resources as Reported by Management and Labor

To what extent do the following statements reflect the success of your Human Resources Department?	Management (N = 89) M	S.D.	Union (N = 54) M	S.D.
Modifying work rules to provide for greater worker flexibility.	3.02	1.13	2.63	1.69
Developing new compensation programs rewarding desired worker commitment and behavior.	2.63	1.13	2.06	1.02
Partnering with union, when possible, in business decisions.	2.79	1.21	2.26	1.29
Making changes in contractual agreements, when possible, to increase worker flexibility.	3.21	1.09	2.83	1.21
Basing partnerships on a foundation of mutual trust and respect between parties.	3.35	1.08	2.67	1.26
Recognizing the central role of collective bargaining but are committed to shifting issues into joint problem-solving forums.	3.11	1.15	2.35	1.22
Improving overall union relationship in collective bargaining process.	3.48	1.08	2.76	1.24

Note. Response scale 1 = no extent 2 = very little extent 3 = some extent 4 = considerable extent 5 = very great extent

Five management personnel and twelve union representatives indicated "does not apply."

Instead of doing a statistical analysis of each individual workplace practice in table 1 of the survey, the researcher matched each workplace practice to one of the three dependent variables—strategic planning, human resources, and training in tables 2-4. The match was based on the relevance of the workplace practice to the dependent variable. The sum average of strategic planning, human resources, and training was used as the dependent variable to calculate the regression analysis. The 15 workplace practices were the independent variables used in the regression analysis and were grouped as follows: strategic planning, questions 1-9: human resources, questions 10-11: and training, questions 12-15. A separate regression analysis was calculated for each independent variable.

The frequency response by management to workplace practices 1-9 in strategic planning, only workplace practice 6 (approached significance, $p = .083$) "workers are actively involved in the selection of new technology" and workplace practice 9 (approached significance, $p = .66$) "workers are organized into teams with substantial authority". The frequency response by the union did not show a relationship with workplace practices 1-9.

The frequency response by management to workplace practices 10-11 in human resources showed a significant relationship. Workplace practice 10 (significance, $p = .023$) "the plant organization has reduced the layers of management from previous organizational structures", and workplace practice 11 (significance, $p = .000$) "the company and the union engage in innovative collective bargaining agreements.

Conclusions and Implications

This research found that all 15 workplace practices as recommended by the U.S. Department of Labor's Office of the American Workplace (1994) are being implemented at various levels in unionized manufacturing companies in Wisconsin. This research found a positive relationship between the implementation levels of four workplace

practices: workers modify their work processes to correct safety problems or procedures; workers modify their work processes to correct production problems or procedures; and workers modify their work processes to correct quality problems or procedures. The company and union engage in innovative collective bargaining agreements.

On the other hand, three workplace practices that did not have a high level of relationship included: workers are actively involved in redefining their jobs; current training programs are developed to support continuous learning; and, workers are actively involved in selecting new technology. The research also found seven workplace practices where management and labor had a low relationship:

- Workers are actively involved in meeting internal customers
- Individuals or teams receive feedback about workers' suggestions
- Workers are organized into teams with substantial authority
- Cross functional teams or other mechanisms are used to increase innovation across organizational boundaries
- Plant organization had reduced the layers of management from previous organizational structures
- Training expenditures were distributed across the entire workforce
- Training programs were evaluated for their effectiveness

This study provided general information on how management and labor perceive their relationship in building high performance organizations. Although the findings of this study indicate that more work is needed to increase the partnership between labor and management, there were several elements that came from the general characteristics of this study that indicated both sides recognized the importance of building a partnership if unionized American industry is to survive. They recognized that production technology was changing and the skills of workers must be increased to meet these changes. Products and services have to be at a lower cost than those of their competitors and the quality has to be increased. They also agreed that different products were needed to stay competitive. In the past four years both agreed that domestic non-union firms had been their biggest competition.

For the implementation level of these 15 workplace practices to increase, management and labor have to take serious note of the Work in America study (1994) which suggests that "partnership is to exhibit the ability of both partners to balance business needs and the interests of employees. As increasing use of joint problem solving helps to break down old distinctions between labor and management thinking and behavior, both recognized that the economic and social levels are interdependent and began to share responsibility of both" (p. 6). Other findings in the study include elements critical to strong partnership, including leadership commitment, gradual building of trust at all levels; sharing power, responsibility, information, and economic gains; and sufficient investment in change.

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Assessing Organizational Readiness for Learning Through Evaluative Inquiry

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In this paper we first review the concept of organizational learning and how it can be facilitated by evaluative inquiry. We then describe the status of HRD evaluation and argue that HRD evaluation should be reconceptualized as a process for facilitating individual, team and organizational learning. Finally, we describe our efforts to develop an instrument that HRD professionals can use for assessing an organization's readiness to engage in learning through evaluative inquiry.

Keywords: Evaluation, Organizational Learning, Assessment

To say that times are changing seems trite today and terribly obvious. In just a few years we have seen major shifts in how organizations are meeting the challenges of a changing global economy, emerging technologies, and an evolving, ever-expanding, multi-cultural workforce. While writers on organizational change and management theory offer a plethora of recipes for achieving success in this dynamic environment, there is growing consensus that the organizations which survive will be flexible, adaptive, and quick to respond to changing conditions, and will use information to make decisions. These organizations understand the value of human capital and will develop systems and processes that maximize all employees' ability to contribute to the organization's success. Intellectual capital -- employees' knowledge, information, intellectual property, and experience will determine the organization's future (Stewart, 1997). As Davis (1996) explains, organizations that make the transition to the knowledge era will learn how to generate, use, and sell information, regardless of the business they are in.

Organizational Learning

Even before management experts started talking about intellectual capital and the coming knowledge era, Argyris and Schon (1978, 1996) were exploring the concept of organizational learning and its role in facilitating organizational change. Since then, many other researchers have contributed to our understanding of organizational learning principles and the characteristics of learning organizations (for example, see DiBella & Nevis, 1997; Dixon, 1994; Marquardt, 1996; Senge, 1990; Watkins & Marsick, 1993). While some researchers and theorists have focused on how organizations as whole systems adapt or change, others have focused on how individuals learn in organizations; that is, how they develop, adapt and update their cognitive models (Edmondson & Moingeon, 1998). However, based on their review of 22 case examples of organizational learning, Watkins and Marsick (1996, p. 10) conclude that most models share the following attributes:

- Learning organizations focus on organizational learning and transformation; it is not enough for individuals to learn.
- Structures and systems are created to ensure that knowledge is captured and shared for use in the organization's memory.
- Leaders and employees at all levels think systematically about the impact of their decisions and work within the total system.
- Learning is built into work structures, politics, and practices.
- Learning is transformative in some way, although it is likely that some new learning will also be adaptive.
- Learning has a greater impact when it involves a greater percentage of the employee population.
- Organizational systems and politics are structured to support, facilitate, and reward learning for individuals, teams, and the organization.

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- Measurement systems benchmark current knowledge and culture and monitor progress toward becoming a learning organization.

In sum, organizational learning can be viewed as, "a continuous process of organizational growth and improvement that: (a) is integrated with work activities, (b) invokes the alignment of values, attitudes, and perceptions among organizational members, and (c) uses information or feedback about both processes and outcomes to make changes" (Torres, Preskill & Piontek, 1996, p. 2). In this sense, organizational learning represents the organization's commitment to using all of its members' capabilities. It is different from individual and team learning in that organizational learning is dependent on individuals and teams sharing their learning in an ongoing, systemic way. Ultimately, organizational learning is about creating continuous processes and mechanisms for learning about how to do things better. In the next section, we discuss the relationship among traditional evaluation practice in HRD, evaluative inquiry, and organizational learning.

Linking Organizational Learning and Evaluative Inquiry

The term evaluation has traditionally been defined as a process of gathering information to make determinations about a program's value, merit or worth (Scriven, 1991 Patton, 1997). In the evaluation field there has been a recent shift from viewing evaluation as a summative activity conducted by external evaluators, to one that is more participatory, internal, and improvement-focused (Preskill & Caracelli, 1997). In the HRD field, evaluation has often been considered part of a program's design process (Andrews & Goodson, 1980; Banathy, 1968; Dick & Carey, 1985; Rothwell & Kazanas, 1998). In linear instructional design (ISD) models, evaluation is typically placed at the end-point of the model. For this reason, and for others, evaluation has been construed as a costly and time-consuming add-on activity that occurs more as an event than as a process (Hilbert, Preskill & Russ-Eft, 1997). As a result, the benefits of evaluation are often overlooked or ignored as a means for providing relevant and useful information for decision-making.

Given the changing nature of organizations and societies, we have come to believe that evaluation must also be reconceptualized to focus on how individuals, team, and organizations can learning from evaluative inquiry (Preskill & Torres, 1999). As a result of our research over the last five years, we have developed a framework for helping organizations engage in evaluative inquiry that results in individual, team and organizational learning. Our framework is based on the following assertions:

- Dialogue, reflection, asking questions and identifying and clarifying values, beliefs, assumptions and knowledge are critical to learning from evaluative inquiry.
- Learning occurs through the social construction of knowledge and can be transformative when stakeholders are able to alter their perceptions and understandings of that which is being evaluated.
- Learning from evaluation occurs within the context of the organization and is therefore mediated by the organization's internal systems and structures.
- Evaluation must be increasingly responsive to the evolving information and decision- making needs of organizations.
- Evaluative inquiry should be ongoing and integrated into all work practices.

Evaluative inquiry for organizational learning and change encompasses the following:

- A focus on program and organizational processes as well as outcomes;
- Shared individual, team and organizational learning;
- Education and training of organizational practitioners in inquiry skills;
- Modeling the behaviors of collaboration, cooperation, and participation;
- Establishing linkages between learning and performance;
- Searching for ways to create greater understanding of the variables that affect organizational success and failure; and,
- Using a diversity of perspectives to develop understanding about organizational issues.

While evaluation's primary focus has been on the "program" as the unit of analysis, evaluative inquiry addresses issues and concerns individuals may have about various processes and systems at the departmental or

organizational level as well. Thus, the unit of analysis is wherever the problem or concern is identified (Preskill & Torres, in press).

Phases of Evaluative Inquiry for Learning in Organizations

Evaluative inquiry for learning consists of three specific phases (see Figure 1). In the *Focusing the Inquiry* phase, evaluation team members determine what issues and concerns the evaluative effort will address, who the stakeholders are, and what questions will guide the evaluative inquiry. In the next phase, *Carrying Out the Inquiry*, organization members determine the most appropriate inquiry design, methods of data collection, analysis and interpretation, and communicating and reporting strategies. The third phase, *Applying Learning* , asks organization members to develop strategies that address the evaluative inquiry's outcomes, design and implement action plans based on these strategies, and monitor the progress of actions taken.

Evaluative Inquiry Learning Processes

As each of the inquiry phases (Focusing the Inquiry, Carrying Out the Inquiry, and Applying Learning) are implemented, organization members come together to engage in the learning processes of: (1) Dialogue, (2) Reflection, (3) Asking Questions, and (4) Identifying and Clarifying Values, Beliefs, Assumptions, and Knowledge (see Figure 1). By participating in these processes throughout evaluative inquiry efforts, greater insights and understandings about organizational issues are developed. Ultimately, these insights and understandings lead to informed decisions for organizational change. It is important to note that we do not view these processes as linear. For example, individuals do not necessarily first reflect, then ask questions and then identify their own values and beliefs. Rather, these learning processes occur through a dynamic, fluid, social interaction among organizational members.

Elements of Organizational Infrastructure

In large part, the success of evaluative inquiry is based on an organization's infrastructure; that is, the strength of the underlying foundation or framework for supporting learning within the organization. An organization's infrastructure can strongly influence the extent to which organization members learn from evaluative inquiry and use their learning to support personal and organizational goals. The elements of the organization's infrastructure include: culture, leadership, communication, systems and structures. The nature of these components provides the footing on which evaluative inquiry efforts can be undertaken and sustained. That is, these components will facilitate or inhibit organizational learning from evaluative inquiry to varying degrees, depending on how they operate within the organization.

The Need for a Readiness Instrument to Assess Learning Through Evaluative Inquiry

As we've worked with organizations interested in applying our framework, we've learned that organizations are often uncertain of where to start. They are unclear as to where their organization currently stands with regard to their readiness not only for organizational learning, but also for learning from evaluation, in particular. Most organizations have little experience with evaluation and even less with linking evaluation to organizational learning concepts and practices.

Assessing Organizational Learning

While the last twenty years have been devoted to developing theories about organizational learning, several researchers and consultants have recently begun developing related assessment instruments. The majority of these instruments are designed as diagnostic tools to determine the extent to which an organization possesses the characteristics of a learning organization (Redding, 1997). The questionnaires tend to ask individuals to think about their department/unit or organization as a whole, and to respond to items regarding the extent to which learning practices are supported at the individual, team and/or organizational levels. Specific dimensions, domains, subsystems, or practices that the authors believe are important to organizational learning generally form the item categories. These categories include vision, leadership/executive practices, culture/climate, organizational structure,

human resource systems, individual and team learning/practices, and work processes. The results of these assessments are used to help an organization improve its organizational learning capabilities. Though Yang, Watkins and Marsick (1998) suggest that "constructing a valid instrument is an on-going process," their preliminary results are showing an "underlying structure that represents patterns of learning activities in the organization"(p.3-3).

Assessing an Organization's Readiness for Evaluation

As organizations increasingly recognize the need to better understand how they can improve their systems and processes to compete in the new techno-global environment, they are expressing an interest in evaluating the effectiveness and impact of human resource development (HRD) efforts (Bassi, Benson & Chency, 1996; Industry Report, 1996). However, most organizations are uncertain about how to conduct rigorous, useful evaluations or how to find the resources and time to do them well (ASTD, 1997). Few trainers have any academic background in evaluation, or much practical experience conducting systematic evaluations. In addition, the models, frameworks, and taxonomies for conducting evaluation that are prevalent in the HRD scholarly and practitioner literature provide little information about the context, procedures, and issues inherent in conducting program evaluations (Hilbert, et al., 1997). Practitioners who understand the value of evaluative inquiry for addressing programmatic and organizational issues worry that their organizations are not "ready" to evaluate; that the organization's culture doesn't appear to support evaluation, or that there are few mechanisms to support evaluation activities. Yet, there remains a growing need and interest in how to effectively evaluate how well and in what ways, HRD programs are contributing to the organization's goals and mission.

In spite of evaluation being a topic in the HRD literature for the last 40 years, as well as 30 years of research on evaluation in the evaluation field, we were only able to locate one instrument on assessing an organization's readiness for evaluation (Mayer, 1976). In some ways, this finding is not terribly surprising. In the HRD field, evaluation has rarely been viewed as a strategic organizational activity. It has traditionally been treated as an after-thought or as a post-course reaction survey tacked on to the end of a training session. There is scant literature on the role evaluation can play in helping organizations achieve their goals, or how HRD evaluation can facilitate the organization's growth and development (Hilbert, et al.).

In terms of the evaluation field, where one might expect to see more interest in developing such diagnostic instruments, there are other possible explanations for its neglect. The field itself, and much of what we know about evaluation today, grew out of the social program legislation in the 1960's and has a history of focusing on large-scale social and educational programs (see House, 1993; Shadish, Cook & Leviton, 1995). Using an assessment instrument to measure an organization's readiness for evaluation would not have been seen as applicable or appropriate in many situations. However, given that organizations in every sector are recognizing the need for evaluating programs at an organizational level, it is perhaps timely to develop such measures. The need for a readiness for evaluation instrument is based on the idea that it would be a waste of resources to engage in evaluative inquiry if the organization is not ready, interested, or willing to use the results of an evaluation. Therefore, such an instrument would yield information that would help prepare and guide the organization in their efforts to evaluate various programs, processes, products, and services.

Developing an Instrument to Assess Learning from Evaluative Inquiry

In response to these needs, we are developing an instrument to assess an organization's readiness to learn from evaluative inquiry. While organizational learning assessment instruments do exist, and are being validated, as indicated earlier, none make any kind of link between evaluation and organizational learning. Thus, we believe there is a need for another instrument that specifically measures an organization's readiness to learn from evaluative inquiry.

By developing and using this instrument within organizations, organizations will be better prepared to use evaluative inquiry practices to address issues that challenge their success. As a result, organizations may benefit in a number of ways. Individuals and team members may: (a) better understand how their actions affect other areas of the organization, (b) ask more questions than give solutions/answers, (c) develop a greater sense of personal accountability and responsibility for the organization's outcomes, (d) act more consultative, (e) be more likely to ask for help, (f) use information to act, and (g) be more willing to share the work that needs to be done. These outcomes may result in an organization's enhanced ability to: (a) develop new products and services, (b) increase productivity, (c) improve morale, (d) experience less turnover, (e) experience less waste/sabotage/error, (f) experience improved

financial performance, (g) experience increased efficiency and less redundancy, (h) provide more effective service to clients/customers, and (i) change more quickly. (Preskill & Torres, 1999)

Research Questions

The following questions are guiding the development and validation of the readiness for learning through evaluative inquiry instrument:

1. What are the questions/items that effectively measure readiness for evaluative inquiry and organizational learning?
2. What is the content and construct validity of the assessment instrument?
3. What is the reliability of the assessment instrument?
4. How can the instrument be used within organizations?

Methodology

The instrument's development began by generating items from three sources: (a) a review of the organizational learning and program evaluation literatures, (b) a review of existing learning organization/organizational learning and readiness for evaluation instruments, and (c) interviews conducted with four organizations that are attempting to integrate organizational learning practices and systems within their organizations. This process first yielded 164 items. The items were then classified into twelve categories, or dimensions based on the *Evaluative Inquiry for Learning in Organizations* framework (Preskill & Torres, 1999).

Nine HRD graduate students were invited to participate in a modified Q-sort process. Each of the 164 items and dimension titles were printed onto cardstock and randomly placed in a stack. Participants were asked to read each potential item and to place it under one of the twelve dimensions. After this process was completed, each of the participant's classifications was matched to the authors' initial classification system. As a result, items that were sorted into different categories were reviewed and resorted by the authors. Based on the results of the modified Q-sort, the number of dimensions was reduced to six, and the items to 82.

The next step is to again have a group of graduate students classify the 82 items into the six dimensions. Based on their sorts, additional revisions will be made. In is anticipated, however, that the final version of the instrument will contain between 70-85 items in addition to some demographic items. The purpose of this activity will be to collect evidence of the items' content validity.

Following the second Q-sort, the next set of tasks will involve establishing the instrument's internal reliability and construct validity. Our intent is to pilot the instrument with approximately 200-300 individuals from various organizations. Item analyses will be conducted on the pilot data to determine the internal consistency of the dimensions established on the basis of the Q-sort data. Items with low discriminatory power will be reviewed for revision or deletion. To determine construct validity, we will examine the results of confirmatory factor analysis (CFA). This technique will be used to verify the adequacy of each item-to-factor association and the number of dimensions underlying the construct.

Results and Conclusions

Given the early phase of this research, we are unable at this time to report on the results of the pilot test (research questions 2 and 3). However, we believe that the instrument will provide HRD researchers, consultants, and practitioners with valuable information as they strive to integrate evaluative inquiry into an organization's learning practices. We see evaluative inquiry as a useful approach to helping organization members answer pressing questions that challenge their success and future. In so doing, it can provide critical information for making decisions that result in increased individual, team and organizational learning.

By developing and validating this readiness instrument, HRD professionals will be in a better position to help organizations know where their learning and evaluation strengths lie, and provide them with ideas and strategies about how to leverage these strengths in ways that maximize learning from evaluative inquiry activities. The readiness instrument will be a tool to begin the process of building evaluative inquiry into the learning systems and practices of organizations.

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The Design and Development of an Evaluation System for Online Instruction

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With the growth in popularity of online instruction has also come the concern for accountability and the need to make adjustments and improvements in online programs. This paper describes the conceptualization and development of an evaluation system that can be used to judge online instructional efforts. The evaluation system addresses concerns of both program administrators and course instructors. Computer technology is used to provide partial automation to reduce respondent burden and to efficiently use evaluation resources.

Keywords: Program Evaluation, Evaluation System, Online Instruction

Online or web-based learning is an education and training phenomena that is growing rapidly around the globe. As with any innovation, there are questions about effectiveness, efficiency, and utility (McCollum, 1998). With online instruction, the issue of evaluation and accreditation is especially important due to various threats commonly perceived by educators and trainers. These threats include a change in student campus life and the roles of professors (McCollum, 1998), the fear that the push for distance learning comes from entrepreneurs and university "bean counters" rather than educators (Mendels, 1999), and whether virtual students feel more isolated than their traditional counterparts (Arenson, 1998). These concerns can only be addressed through systematic research and evaluation efforts.

Human resource development professionals are blessed with a rich history of evaluation thought, development, and research, primarily derived from the fields of education (Alkin, 1969; Patton, 1997; Scriven, 1967; Stake, 1967, 1978, 1981; Stufflebeam, 1967, 1985; Stufflebeam, Foley, Gaphart, Guba, Hammond, Merriman, & Provus, 1971; 1997) and human resource development (Holton, 1995; Kirkpatrick, 1976; 1996; 1998; Kaufman & Keller, 1994). From these foundations, specialized evaluation processes and systems have been designed and implemented for HRD interventions, including training programs (Raab, Swanson, Wentling, & Clark, 1992, Wentling, 1980, 1992, 1993).

The design of evaluation systems for online instruction has been attempted by a number of professionals, including instructional designers of CBT systems (Clark, 1994; Draper, 1996; Simonson, 1997) technology experts (Jackson, 1990; Kimball, 1998; Middleton, 1997), and HRD practitioners (Magalhaes & Schiel, Pisik, 1997). The work of these individuals demonstrates progress in applying intuitive principles and practices of evaluation to online environments. Other authors have provided practical applications of evaluation theory by offering suggestions and guidelines for the evaluation of online instruction (Khan, 1997; Nichols, 1997; Oakes, 1997; Ravitz, 1997; Thorpe, 1993).

Problem Statement

The evaluation of online instruction is an important part of the design and implementation process. Even though practitioners and academics currently evaluate online instruction, their attempts have been limited to the use of traditional research methods and intuitive approaches to evaluation. There appears to be a lack of systematic evaluation of online programs that is built on evaluation theory and practice. The activity described in this paper is an attempt to conceptualize and develop a transferable, adaptive evaluation system for online instruction.

Conceptualization and Development of the Evaluation System

The purpose of the project was to design, develop, and implement an evaluation system that would meet the needs of the developers and sponsors of online instructional programs. The activities of the project reflect major efforts to obtain information, design components of the evaluation system, and test and revise the evaluation system. The specific activities of the project were to (1) develop a conceptual model for online evaluation, (2) identify specific

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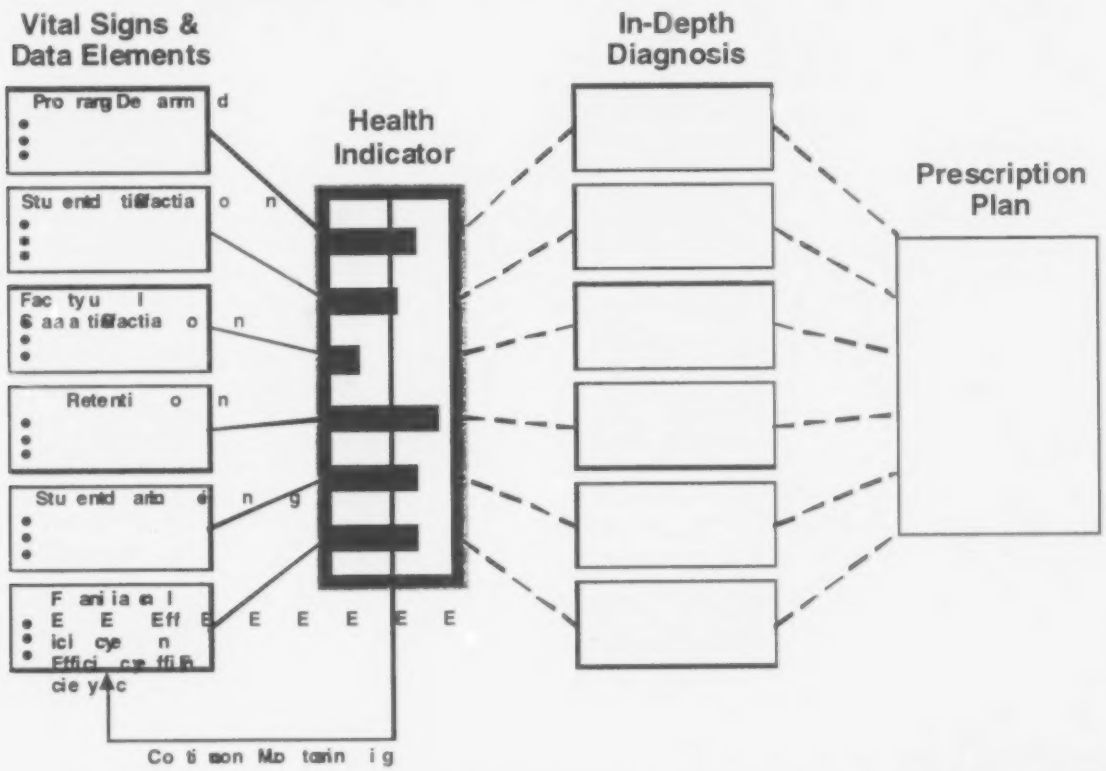
vital signs of an online program and determine appropriate measures, (3) automate the collection and analysis of evaluation data through knowledge engineering approaches, (4) create an electronic performance support system to assist in program evaluation, and (5) conduct a field test of the evaluation system. The following sections describe each of the five major activities that are being accomplished in the formulation of the Illinois Online Evaluation System. At the time of this writing the evaluation system is evolving. Many of the tasks are complete, while some are underway.

Activity 1: Development of a Conceptual Model for Online Evaluation

This activity involved the conceptualization and design of the overall evaluation system, with the identification of major components and their functional relationships. The evaluation system, as currently designed, occurs in three stages: (1) vital sign assessment, (2) in-depth analysis, and (3) program improvement planning (see Figure 1). The evaluation system can best be explained using a medical analogy in which a physician examines a patient's vital signs to determine the patient's current state of health. Vital signs that are below acceptable standards are examined in more detail, utilizing more precise information and investigative techniques. As a result of the analysis, a plan is developed to facilitate improvement.

Figure 1. The Online Evaluation System.



Vital sign assessment (Stage 1) diagnoses the general health of the online program and individual online courses using data collected through routine activities. Example data include the number of inquiries about the program, the number of applications received, and the performance of students in the individual courses. The data are used to calculate a program's "health" rating in six areas: (1) student demand, (2) student retention, (3) student satisfaction, (4) faculty satisfaction, (5) student achievement, and (6) financial efficiency. The ratings help program personnel and sponsors monitor the overall performance of the program and individual courses to identify areas that may be problematic.

During the *in-depth analysis* (Stage 2), any vital signs that are identified as substandard are analyzed in detail. A thorough investigation is conducted to determine underlying problems or causes. Often this investigation

requires the collection of additional data, or the use of data from related vital signs. For example, a low rating in student satisfaction might lead to the further analysis of the individual items that comprise the student rating indicator. Additionally, a review of data related to student learning and faculty satisfaction might be done.

Program improvement planning (Stage 3) provides solutions to the problems that are investigated during the in-depth analysis. Alternative strategies for solving the problems are identified, along with resource requirements for implementing the solutions. Program personnel are able to select various courses of action and develop plans for addressing the identified problems.

Activity 2: Vital Sign Identification and Development of Measurement Instruments and Procedures

The major activity in the development of the evaluation system involved several inquiry endeavors to identify "quality indicators" for use as assessment criteria. Lists of quality indicators drawn from the literature on computer mediated education, outcomes of education, and evaluation were identified and prioritized. An initial list of 18 "vital signs," developed from the results of the literature was reviewed by a group consisting of HRD and evaluation experts. The list of vital signs was reduced to six by determining the relative importance of each to the stakeholders of the evaluation.

Instruments and procedures for gathering, summarizing, and analyzing vital sign data are being developed by project staff. Data used to calculate vital sign ratings are obtained through analysis of electronic archives, document review, surveys, student testing, and expert review. Sample data elements used to calculate each vital sign rating are described in Table 1. The actual vital sign ratings are calculated from student test scores, mean scores on survey instruments (i.e., student satisfaction and faculty satisfaction), and data comparisons (e.g., enrollment, retention, financial data). Standard transformations of the data are performed to provide a common scale for each vital sign to facilitate portrayal and comparison across the vital signs.

Table 1
Data Elements for Vital Sign Rating Calculation.

Vital Signs		Data Elements
Program Demand	8.	Number of applications requested per semester
	9.	Number of applications received per semester
	10.	Number of telephone contacts per semester
Student Satisfaction	11.	End of course student ratings of program content, quality of instruction, instructional resources, technology used, amount of interaction, instructional methods
	12.	Mid-semester student ratings
	13.	CISS data regarding perceptions of course interaction, course structure, and technical support
Faculty Satisfaction	14.	Faculty ratings of technology, technical support, interaction with students, quality of student work
Student Retention	15.	Percentage of dropouts from beginning to end
Student Learning	16.	Self-assessment of learning
	17.	Course project scores
	18.	Quiz and Test scores
	19.	Course grades
Financial Efficiency	20.	Course design cost
	21.	Course delivery cost
	22.	Publicity cost
	23.	Total unit cost, direct cost, overhead cost,
	24.	Tuition revenue

Activity 3: Knowledge Engineering

As work progressed in conceptualizing the evaluation system and identifying vital signs, alternatives for automating the system were explored. Literature on artificial intelligence, decision support software, electronic performance support systems (EPSS), and expert systems was reviewed by project staff. Due to the technology potential for the evaluation model, its focus on internal rather than external evaluation, and its purpose as a self-evaluation tool to be used by a variety of online personnel, including program administrators, instructors, and instructional designers, it was ultimately decided to utilize performance improvement technologies to automate much of the data collection and analysis functions. Performance improvement technologies make dynamic use of technology to facilitate data collection and analysis tasks and to improve individual performance by providing timely information, advice, coaching, and training. An electronic performance support system is an example of a performance improvement technology that "captures, stores, and distributes individual and corporate knowledge assets throughout an organization to enable an individual to achieve a required level of performance in the fastest possible time and with the minimum of support from other people" (Raybould, (1995), p. 11). EPSS technologies often include an information database, an expert advisor, customized tools and templates, and the potential to run simulations. Beyond a few efforts in corporate settings, this technology has not been widely applied in education and training for evaluation purposes.

Available literature on performance improvement technologies was reviewed. A key component to any expert system is the knowledge base of a recognized expert in the problem area (Hayes-Roth, et al., 1983). Focus groups of recognized online education experts from the University of Illinois were held to ascertain their perceptions of what constitutes effective online education and evaluation. These experts worked through simulated evaluation problems to test their ideas and were asked to develop specific guidelines and suggestions for improving the vital sign assessment and in-depth procedures. The framework for the expert system was based on the outcomes of this activity.

Activity 4: EPSS Development

The investigative framework gleaned from the knowledge engineering activity was developed into a series of If-Then rule process charts (one for each vital sign) by the developers. One partial example of a vital sign rule process chart is shown in Table 2 where a variety of "then" statements are provided in response to the low indication of student satisfaction.

Table 1
Sample EPSS Rule Process Chart for One Vital Sign

Vital Signs	Data Elements
IF: Student Satisfaction as indicated by Student Rating Form is Low,	THEN: 4. review subscores for student ratings results. 5. identify the subscores that reveal the area of problem. 6. review results to individual items in the problem subscore(s).
IF: If more information is needed to determine the problem,	THEN: 7. develop an interview questionnaire and contact a sample of students by phone. 8. develop an e-mail questionnaire with relevant questions and send to a sample of students. 9. summarize new student data. 10. present the summary of all results to the instructor and discuss potential causes of the problem.

The probable causes identified by the online instruction stakeholders were incorporated into the rule process charts to complete the exploration diagrams. Sample computer display screens were also developed that simulate what each screen on the finished performance system program should look like. Using the rule process charts and sample screens, project staff created the performance support system. Prototype system routines were reviewed and revised to correct programming errors, to improve interface inadequacies, and to ensure user friendliness.

Activity 5: Field Testing

The performance support system shell was reviewed by selected professionals as a preliminary step to pilot testing. Data were programmed into the system to allow users to explore all possible investigative paths in the in-depth analysis. Formal and informal feedback was provided, which resulted in minor revisions in the programming (elimination of "bugs" from the system) and content of the evaluation system. The evaluation system is currently being tested within an online masters degree program in HRD at a large Midwestern university. Following this initial testing, there are plans to expand the field testing to other university level online programs and in corporate settings.

Implications and Discussion

What truly separates the vital sign concept from traditional evaluation is its use of specific outcome measures with minimal data requirements to create a cursory picture of the general status of a program. The six vital signs are measured for each individual online course. Efficiency is maximized because initial data requirements are minimal, only specific programs are examined, and only problematic vital signs are subjected to further examination.

The most obvious technical feature of this new evaluation system is its use of the electronic performance support system. Used primarily in medicine, manufacturing, and engineering up to this point, this is the first attempt to adapt advanced technology to educational evaluation. This application, of course, has its limitations. Attempting to set limits on variables in social science research always causes consternation, for fear of eliminating some possible responses from consideration. In developing investigative paths for the expert system, limits had to be set. However, the data collection instruments and procedures were carefully developed and extensively field tested. The knowledge and skill of recognized evaluation and online experts were incorporated into the system. These factors, coupled with the extensive field testing still to be completed, result in an evaluation system that is as true to human expert evaluation as is possible. It is also important to remember that the system will be operated by human evaluators and all final judgments will be made by personnel of the program online. Thus, it should not be construed that the computer is replacing the human evaluator. It is only providing valuable assistance, which will facilitate self-evaluation of online programs.

The broad applicability of the vital signs gives this system utility for online program evaluation beyond the University of Illinois. Ultimately, the model developed for use in this system, along with the computer technologies that are applied, could be adapted for use in evaluating any online course or program in the public sector as well as in private sector training and human resource development programs.

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The Mixed-Method Evaluation in HRD - A Description of Methods Applied in the Industrial Development Program

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This study focused on the HRD program evaluation in a case from the Finnish paper industry. Both philosophical and practical foundations of the mixed-method evaluation were described. The empirical study included description and analyses of the evaluation procedures implemented in the target program. The conclusions consisted of suggestions for the HRD practitioners, i.e., for purposes the mixed-method evaluation is useful, and what are the advantages and the disadvantages of the mixed-methodology in HRD evaluation.

Keywords: Mixed-Methods, Evaluation, HRD Program

Introduction

This study aimed to answer two questions: (1) In the light of the case analyses, what types of evaluation needs in HRD could be best served by mixed-method evaluation procedures? And, (2) what are the advantages and the disadvantages of mixed-method evaluation in HRD programs?

Evaluation in human resource development (HRD) has relied strongly on Kirkpatrick's (Kirkpatrick, 1976; Preskill, 1997) model for evaluating training programs. Regularly the evaluations which apply this model employ quantitative methodology, and the data are gathered via survey questionnaires. HRD is a complex social phenomenon to evaluate. There is no single method or methodology by which the effectiveness of development actions could be evaluated in a superior and ultimate way in order to serve the multiple needs of stakeholders. Evaluation and its methodology should be adjusted into purposes which control evaluation process (Ravishankar et al., 1997). Thus mixed-method evaluation is a more useful and purposeful design for HRD evaluation than e.g. the naturalistic or the postpositivist evaluation paradigms alone.

Mixed-method Evaluation in the Light of Philosophy of Science

The method discussion has been dominated by the two paradigms mentioned. The debate between the naturalistic or constructivist paradigm (Guba & Lincoln, 1989; Guba, 1990; Lincoln & Guba, 1985; Lincoln, 1990) and the postpositivist paradigm (Phillips, 1990; Mathiason, 1988) has emphasized the bi-polar dimensions, such as quantitative-qualitative, realism-relativism, and objectivity-subjectivity. The contructivists, like Guba and Lincoln, are proponents of the purist stance toward mixed-method evaluation; they argue that different paradigms embody completely different assumptions about human nature and the world. According to their understanding, it is not possible to mix different inquiry paradigms within a single study. (Greene et al., 1989; Greene & Caracelli, 1997.)

The postpositivist school is not as rigid as the constructivist school. According to this paradigm, there are philosophical differences between the paradigms of social sciences. But the philosophical assumptions of different paradigms are logically independent, thus paradigms can be mixed. Quantitative methods are found useful in studying social phenomena, even though it is not believed that human behavior could be controlled and defined by a set of natural laws, as logical-positivists believe. The postpositivists try to identify consistencies affecting human behavior, but not by denying the usefulness of qualitative methodology. The third stance toward mixed-method evaluation is the dialectical position in the methodology toward the mixed-method debate. Its idea is that philosophical differences between paradigms exist, and that they are important. Differences should be honored and used both within and across studies in order to achieve enhanced understanding. (Greene et al., 1989; Greene & Caracelli, 1997.)

In this study these paradigms were seen as complementary choices rather than competing methodological schools. The empirical study part employed both the postpositivist and the constructivistic paradigms in the evaluation of the HRD program. The general methodological discourse has shifted its focus in the mixed-method direction, too.

The Mixed-Method Evaluation in Practice

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The mixed-method in evaluation means that multiple data gathering or analyzing procedures are combined and used within the same study. Different procedures could be used to answer the same evaluation questions, or they could be employed in answering different evaluation questions. The mixed-methodology in HRD evaluation as in other social science evaluation fields too, is applied in order to generate deeper knowledge and broader insight into the phenomenon under analysis. All methods have limitations and biases, and multiple methods can be helpful in counteracting those biases. (Datta, 1997; Greene & Caracelli, 1997; Waysman & Savaya, 1997.)

Triangulation was the first well known attempt to mix methods in social sciences. Psychologists in the 1950s used multiple methods in studies on personal traits to strengthen the validity of their studies. In triangulation, two or more methods are used to assess the same phenomenon in order to strengthen validity, but also to seek convergence of the findings. ***Bracketing*** is the second multiple method design. It seeks estimates on the correct answer. *Complementarity* is the third type of mixed-method evaluation design. Its fundamental idea, is to reach a deeper understanding of the evaluation object. There are three kinds of complementarity evaluations: different methods are applied (1) to evaluate different study components or phenomena, (2) to assess the plausibility of validity threats, or (3) to enhance the interpretability of the assessments of a phenomenon. (Greene et al., 1989.)

In addition to mixing methods or methodologies within the same study, it is possible and in some cases purposeful to mix data sources, investigators, and theories. Data source triangulation means that multiple data sources are employed in a single evaluation. Investigator triangulation means that several, at least two, researchers analyze the same object either using different methods, or validating the findings produced by one method. Triangulating theories are also possible and acceptable in evaluation studies. The theoretical frame of reference of evaluation studies are eclectic in nature; thus not much attention is paid to theory triangulation. The most discussed type of triangulation is mixing methodologies or methods. (Denzin, 1978; Mathison, 1988.)

A Brief Description of the HRD Program

The present study was focused on a HRD program in the Finnish paper industry in 1995-1996. Metsä-Serla corporation invested USD 500 million into the world's biggest fine paper mill. That time Metsä-Serla was the fifth biggest pulp and paper producer in Europe. It has production units all around the European continent, and its products are sold in Asia, South America, and North America, besides Europe.

Within the technical paper mill construction project there was a HRD program; the new technology required modern and up-to-date vocational qualifications from the workers. Over 150 workers were hired to the new fine paper mill through careful recruitment procedures. The HRD program lasted 8 months including classroom courses, practical training periods, excursions, simulations, and some organized leisure time activities, too. One third of the trainees were without previous work experience in the paper industry. This made HRD one of the key factors in terms of the successful start-up of the new paper mill. (Nurmi, 1998.)

The HRD program was one of the biggest ever conducted in the Finnish private sector with its USD 10 million budget. In addition to its size, there were other innovative aspects, too. Behavioral scientists were hired to plan, implement, and evaluate the HRD activities, while the HRD personnel regularly include only technical experts. Stakeholder involvement in the planning and evaluation processes, the great emphasis given to the training in so called soft skills, high educational requirements for hired workers, and finally the multiple evaluation procedures implemented both during and after the HRD program, were crucial meaningful innovations in the HRD program of Metsä-Serla.

The HRD program was conducted simultaneously with the technical paper mill construction project. The final goal of both projects was the successful start-up of the new paper mill in August 1996 (Figure 1). There were also other objectives set for HRD, which were related to the start-up goal. In addition to training for the workers HRD included management training and training of the maintenance personnel. This study focused on the training of the operators, i.e. workers of the new paper production line (Nurmi, 1998).

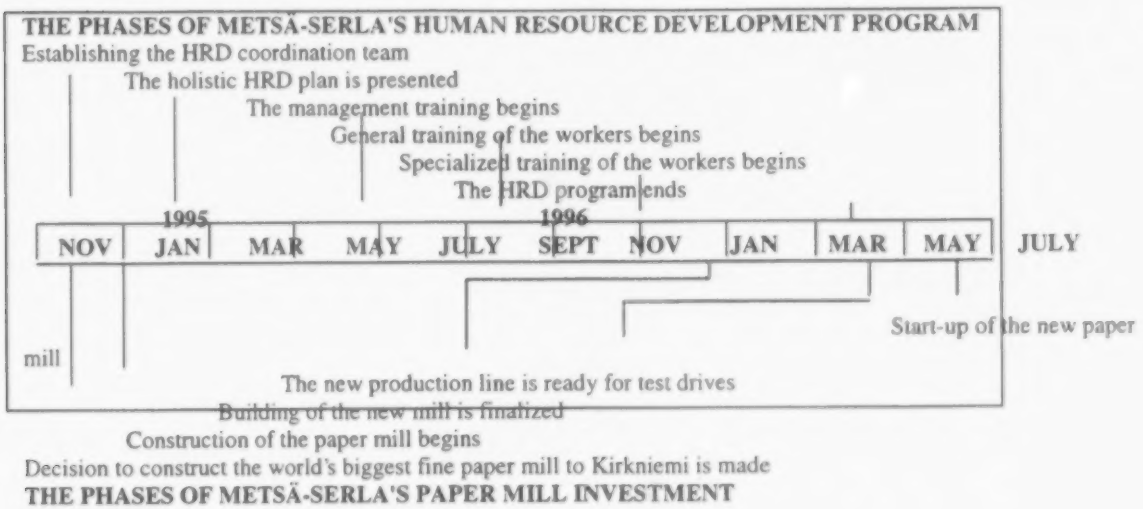

Figure 1. The chronological description of Metsä-Serla's paper mill investment including the human resource development program.

The Empirical Study

The empirical part of the study describes the evaluation methods that were used in the target program. The description focused on the following points: What were the evaluation questions? What was the purpose of the evaluation? What data gathering methods were applied? What data analysis procedures were applied? Was the evaluation formative or summative? The method description formed a basis for the analysis of the advantages and the disadvantages of the evaluation procedures.

The Mixed-Method Application in this Study

The postpositivist frame of reference was used in this study. However the evaluation procedures analyzed in this study contained naturalistically oriented elements, too. Postpositivism means that by applying quantitative surveys and multivariate analysis, it is possibile to identify general patterns which affect learning and satisfaction. This study represents complementarity in terms of the mixed-method design, rather than triangulation or bracketing. Different methods were used to assess different components of the phenomenon, which in this case was the effectiveness of the HRD program. The final purpose of mixing methods was to reach deeper understanding, than that gained via a single method.

Different data sources were used also in this study. This is evident always when the aim of the evaluation is to analyze the effectiveness of the whole program, instead of a single aspect. Data sources are described in the results section. Even though one researcher conducted further analyses on the effectiveness of the HRD program, other investigators conducted data gathering and analyzing of procedures during the program. Therefore this study also employed investigator triangulation.

The Description of Evaluation Procedures Applied in the HRD Program

The first evaluation question, i.e. "How did the trainees feel after each course?", represented the traditional first level evaluation of Kirkpatrick (1976) which emphasizes the reactions of the trainees. The purpose of this phase was to improve the program by revising course contents and other activities in a direction that would be most beneficial for the trainees. The data were gathered by a survey including numerical and open-ended questions. The names of the respondents were asked; this offered an opportunity to later discuss with the trainees their comments and suggestions. The data were analyzed immediately after each training period to get the formative evaluation information as quickly as possible. Means and standard deviations were produced. If the mean of the course with

most of the items was under 3.5 (the scale 1-5; 1 failure, 5 success), some improvements or further information was required. Qualitative data were not analyzed for research purposes, but information from the open-ended answers was used in practice (Table 1).

The second question, "How did the trainees progress and learn?", was based on Kirkpatrick's second level evaluation (Kirkpatrick, 1976), where the focus is on learning in terms of knowledge, skills, and attitudes. Attitudes were not assessed in this case, however. Learning was analyzed for both formative and summative purposes. The formative purpose was the same as with the first evaluation question. The summative evaluation was conducted for the needs of the formal educational system; trainees were offered an opportunity to pursue a vocational certification within the development program. The vocational system, controlled and coordinated by the Finnish National Board of Education, required documentation of the trainees' progress. Learning was evaluated by multiple-choice and open-ended questions. Besides these knowledge-oriented measurements, there were both manual and automated practical simulations which assessed the skills of the trainees in a specific competence area. (Brown, 1996; Knight, 1995.) The results of the learning assessments were coded into grades for the purposes of the certification system. Descriptive statistics were produced to evaluate the success of the trainees, and to compare different trainee populations (Table 1).

Based on the learning assessments, further data analyses were conducted to identify the latent factors effecting the trainees' success and behavior. This summative type of evaluation was done by multivariate data analysis. The results of the assessments were first summarized into a few groups by factor analysis; these factors were then predicted in multiple regression by demographics. The findings will be used when new HRD actions are planned and implemented in the future (Table 1).

The trainees' feelings and experiences were evaluated also more in depth than merely by reaction surveys. Ten trainees were asked to be informants, i.e. monitor persons. Their assignment was to keep a learning journal during the eight-month program, and to be interviewed three times: at the beginning, in the middle, and at the end of the program. The purpose of this evaluation was to obtain understanding of the trainees' behavior and actions in the program, but this naturalistic data could also be used in the planning process of future programs. The data analyses at this phase have not yet been completed. The data analyses will include case study analyses in which each monitor person represents one single case, and there will be also a phenomenological section for defining concepts, such as vocational competence in the paper industry (Table 1).

The experiences of the HRD personnel were gathered and analyzed for the same purposes as the trainees' experiences, but the data gathering methods were different. The HRD experts wrote their comments on a qualitative questionnaire, which was used instead of interviews to save time through avoiding time-consuming interview transcription. The management was interviewed to gather their beliefs and experiences from the program. Even though the top managers did not attend the development actions on a daily basis, their experiences of the merit of the program will be crucial, because future decisions to invest resources on HRD will be done by these managers. At the end of the program, future needs assessment was carried out. The supervisors discussed the program with every worker, and together they filled out a needs assessment form (Table 1).

The last evaluation question, "Were the organizational HRD goals attained?", included four subquestions, because there were four organizational goals set for HRD. The attainment of each goal was analyzed in order to evaluate the effectiveness of the program. Multiple data gathering and analyzing methods were employed at this phase of the evaluation. (Nurmi, 1998; Table 1.) This evaluation had a bottom-line orientation, thus representing Kirkpatrick's (1976) fourth evaluation stage, where the focus is on the training effects on an organization's results.

Trainees' reactions

This evaluation was beneficial, because the results were gathered and analyzed immediately after the training and the results were available a couple days after the course. The reaction questionnaire was easy to answer, and the open-ended questions offered an opportunity for the respondents to explain their reactions more deeply than in the numerical sections. The use of real names brought more validity; the respondents were responsible for their comments and stood behind their views. The mainly statistical evaluation data could be used as a source for generalizations about the reactions of the trainees, and different courses of the program could be compared in terms of trainee satisfaction.

On the other hand, some disadvantages were found, too. Because the program consisted of several courses, the trainees had to fill out the same questionnaire many times. This was perceived frustrating, and sometimes led the subjects to fill out forms mechanically, without reflecting their real feelings. Sometimes, a minor incident at a course, e.g. one negative comment by a trainer, received much more attention than would have been appropriate. And this can greatly affect the reaction evaluations, although there were not necessarily big problems in the course.

Finally, it is a costly investment to transfer reaction data into computer files, in such a format that they can be used in further statistical analyses.

Table 1

Evaluation Procedures of the HRD Program of Metsä-Serla Corporation

EVALUATION QUESTION	PURPOSE	DATA GATHERING	DATA ANALYSIS	SUMMATIVE/ FORMATIVE
How did the trainees feel after each course?	to clarify reactions of trainees, in order to improve the program	survey questionnaire after each course	descriptive statistics: means & standard deviations	formative
How did the trainees progress and learn?	to identify areas needing more emphasis	multiple-choice, open-ended questions; simulations	grades ⇒ descriptive statistics, mean comparisons	formative
--- " ---	to identify trainees who obtained a vocational certification	--- " ---	--- " ---	summative
Which demographics predicted the trainees' success?	to identify fundamental factors effecting the trainees success	--- " ---	multivariate data analysis	summative
What were the trainees' feelings and experiences in the program?	to understand the trainees actions, and to improve future HRD	interviews and learning journals	qualitative data analysis: case study & phenomenology	summative
What were the HRD personnel's experiences after the program?	to improve future programs	qualitative questionnaire	case study	summative
How did the management evaluate the HRD program?	to understand the management's attitudes, which affect future human investment decisions	interviews	case study	summative
What future development needs did trainees have?	to coordinate future HRD actions in the organization	questionnaires filled with supervisors	content analysis	formative
Were the organizational HRD goals attained?	to define the merit of the HRD program	production information, interviews, assessments	qualitative comparisons, content analysis, analysis of variance	summative

Advantages and Disadvantages of Evaluation Procedures

Assessments of learning

This evaluation phase offers an instrument for instructional designers and trainers to follow up the progress of the trainees. If there are problems, e.g. learning difficulties either within the whole trainee population or individually, HRD actions can be revised, and in addition, individual solutions could be produced to make learning and studying more meaningful and effective. Learning assessments are useful for trainees also because they give information about their own progress. The trainees can improve their study habits and put more emphasis on areas where they have learning difficulties. Quantitative assessment data can be used for further statistical analyses, which

have potential for generalizations within the population, but across to the other similar populations, too. Simulations can be used as one type of learning measurement, because the trainees can test their skills in a real-life setting, which is usually risk-free, unlike their job assignments in the production line.

It is difficult to find relevant learning assessments in industrial HRD. Most of the assessments have been developed case by case, and this is time-consuming. It requires also considerable resources to give grades in paper-and-pencil examinations. In the field, there is a lack of comparative assessment results. In the case of Metsä-Serla, there was one assessment of the conceptual mastery of paper production (Leppänen, 1993, Leppänen & al., 1996), in which the data had been gathered from other similar organizations. But all the other evaluation tools were developed in the program. If there are no control groups or comparative populations, the question arises, what is the purpose of learning assessment. Multivariate data analyses require large sample sizes, and their results are not necessarily useful for a single company. These types of analyses are rather conducted by research institutes for scientific purposes. The trainees may feel that learning assessment is used simply to control their actions, and as a result their focus may change from learning for work to learning for examinations, as in the case of many formal educational settings.

Evaluation of Experiences

Naturalistic evaluation procedures produced more depth data about the experiences, feelings and beliefs of stakeholders than reaction evaluation or learning assessments. This information is a necessary foundation for a deeper understanding of the HRD program. Qualitative data describes those nuances and thinking patterns which are regularly left out of surveys. It would be more meaningful for the respondents to explain and reflect upon their experiences, than simply fill out questionnaires.

The collection and analysis of naturalistically oriented, qualitative data from the participants of the HRD program and from other stakeholders is a huge investment in terms of time and money. The designing of data gathering procedures also requires more resources than the planning of questionnaire surveys, because the same interview structure can not be used in different cases. Like all qualitative research, also this kind of evaluation is not a valid base for generalizations. The definition of the final merit of the program does not often employ qualitative type of data as the major data source.

NeedsAssessment

It was felt that more detailed answers could be received, if the needs are assessed during the HRD program. If this evaluation had been conducted after the start-up of the paper mill, the workers as well as the supervisors, would have felt that they have more important things to think about and do than the HRD needs assessment. On the other hand, the needs assessment was conducted by questionnaire, and this might have led the supervisors and their subordinates to fill out the form more carefully. Thus the data gathering method might have caused lack of interaction and communication between the supervisors and the workers.

The Attainment Analysis of Organizational Goals

This evaluation was beneficial in defining the final merit of the program. It is relevant for the organization to receive information on how the organizational goals were attained, if the stakeholders, including the management, have been involved in the goal-setting process. Regularly organizational goals are related to bottom-line results, thus this type of evaluation could be used in assessing the financial effects of human investments.

A political orientation is inherent in this evaluation procedure; it is crucial importance to know whose goals are important and defined valuable. Even though an organizational perspective is needed for the bottom-line focus, in many cases the top-management, which has to set the goals, does not have any connection to the HRD practice. It is difficult to define and evaluate the effects of HRD on the financial results of organizations, but this is needed in order to legitimize the development actions and secure beneficial investment decisions in the future.

Conclusions

Mixed-methods in evaluating HRD programs is a purposeful design, when the aim is to assess a large program from multiple viewpoints. Conducting an evaluation according to Kirkpatrick's (1976) model requires both quantitative and qualitative procedures in order to be informative and satisfactory for every stakeholder group, and successful in

documenting the varying aspects of the program. Even the first level evaluation, i.e. reaction evaluation, produces deeper data, if also open-ended qualitative questions are applied.

The usefulness of the mixed-methods depends on the stakeholder group that is served by the evaluation. Sometimes purely quantitative evaluation procedures could produce the required information to analyze the financial effects of HRD, even though it is almost impossible, separately from other organizational effects to show unquestionable evidence of the economic benefits of successful HRD actions. Evaluation data on the experiences and feelings of stakeholders, such as the personnel, the management, HRD experts, external trainers, and even shareholders, could be presented within the organization in a way that is interesting and meaningful to the rest of the work community.

It should not be expected that mixed-method evaluation produces results that will automatically become an integrated whole. There may be inconsistencies, or even controversies between the results produced by different evaluation methods. This should be taken as evidence of the richness of social phenomena, and evaluators should try to understand why there are differences, and whether there is a reason for differences to appear on certain occasions. (Mathison, 1988.) The results of this study showed that there are several advantages and disadvantages in applying mixed-method evaluation. The mixed-method approach requires more expertise, more time, more money, and more implementers than evaluation conducted by a single method. Evaluation needs should be analyzed case by case, and possible benefits of mixed-methods should be weighed, before the final evaluation is designed (Waysman & Savaya, 1997).

This case study offered suggestions for HRD practitioners who are in the role of evaluator, too. Evaluation should be well planned before HRD implementation takes place. In this case, the evaluation was mainly planned during the training, thus preassessments could not be made. If financial effects of the HRD program are required as a result of the evaluation, then expected financial outcomes should be defined with the managers of the target organization (Swanson & Mattson, 1997). Otherwise it is quite difficult to isolate the effects of HRD after the program implementation has taken place. In gathering qualitative data, evaluators should be careful not to produce large amounts of information, which is neither needed nor useful. If the evaluation is conducted by a team of evaluators, instead of a single evaluator, there should be mutual agreement about the responsibilities and assignments of the team members. In the Metsä-Serla case, there was not a special evaluation expert; the personnel of the HRD team were also responsible on the evaluation procedures. Thus, there were no extra expenses from the program evaluation; HRD coordinators designed and implemented the evaluation, in addition to their main responsibilities in the program. But a HRD expert does not necessarily have the qualifications of an evaluator. A person who plans and implements evaluation in practice obviously is not an evaluator. The same difference exists between a laboratory technician and an analytical chemist, the former implements measurements, as does the latter, but only the latter designs research studies and interprets study findings (Scriven, 1996).

Finally, conclusions can be drawn on some ideas about the relationship between quantitative and qualitative paradigms in social sciences. Those paradigms are not alternatives for each other; qualitative can not replace quantitative, or vice versa. The paradigms seek answers for different questions. Therefore it is not recommendable to name some research areas or objects to be suitable just for one research design. There is always data between the researcher and the study object. It is not a piece of the object, even though some qualitatively oriented researchers assume so. For both survey and qualitative studies, data are based on human speech, and there is no base for an argument that qualitative data are somehow closer to the object than survey data. Quantity and quality are not the opposite, they are different concepts for organizing and understanding reality. (Töttö, 1997.) As mentioned at the beginning of this paper, the method debate and evaluation practices should have shifted their emphasis from the quantitative-qualitative contradiction to a more open, but at the same time analytical and critical way of mixing different methods in evaluation research.

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The Effect of Two Training Systems on Trainee Satisfaction, Learning, Job Behavior, Retention and Organizational Performance

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The effect of two systems of training using the same course content with two different groups of trainees revealed there was no significant difference between trainee satisfaction, learning, or individual job performance outcomes. However there were significant differences between learning ratings assessed by the corporate instructor versus the manager, as well as the retention rate and organizational performance measures for each training system. Implications for HRD professionals and the use of distance technology are discussed.

Keywords: Training Systems, Learner Outcomes

This evaluation research study focused on the effectiveness of two training systems for delivering the same sales training content. Training System One (1) is described as a manager-led, self-paced videotape delivery system. Training System Two (2) was different in that it used the same corporate instructor with a group method over two-way interactive videoconferencing. This study focused on comparing training effectiveness outcomes for the two training systems using Kirpatrick's (1996) Four Level Evaluation Model as the general format. The same training goals and objectives were used by both systems. Objectives defined what the trainee was expected to do as a result of the training related to job performance. Within the three domains of learning: cognitive (thinking), affective (feeling) and psychomotor (task performance), the sales training was expected to help participants integrate these three domains and demonstrate their skills throughout the course. The primary instructional techniques used were structured discussions, videotapes to demonstrate behavior, role-plays, written exercises, and practice. A large amount of interaction is required by the training objectives.

The outcomes expected of the sales training was to help new representatives learn the job and become productive contributors earlier. By providing structured on-the-job training (Jacobs & Jones, 1995) at the office location, the context and conditions under which the trainee ultimately performed was an essential component of both training systems. The difference was that one system was conducted independently with the manager at a negotiated pace, while the other used a scheduled group method using distance technology with a corporate trainer. Acceptable standards of job performance were emphasized in both systems.

Theoretical Framework

Issues regarding interactivity, course structure and cognitive style were explored and measured in this study. Interactivity is the active participation in the instruction/training process. Wagner (1998) suggests that performance improvement specialists should look at the outcomes of interactions: Do they change the learner and move them toward action to the stated goal? Interactivity is also referred to as "dialog" which is described by Moore and Kearsley (1996) as any interplay of words, actions, ideas and other interactions between the teacher and the learner when one gives instruction and the other responds. It is measured in this study by the total number of hours recorded by the trainee based on their interaction with the manager or instructor throughout their training period. Research literature in cognitive and perceptual psychology supports the importance of interaction in the learning process (Neisser, 1976 and Gardner, 1985).

By taking a systems view, course structure (Moore & Kearsley, 1996) refers to the course design variables that consist of elements such as learning objectives, content themes, information presentation, case studies, pictures, illustrations, exercises, projects and tests. In this study, Training System 1 is less structured than Training System 2, since more variability and modification is tolerated in Training System 1. Moore identifies both dialog (interaction) and structure in his theory of transactional distance (Moore, 1973; 1983). He suggests that it is these two variables that can be manipulated to reduce the amount of psychological distance between a learner and the instructor when engaged in a distance learning-teaching process regarding interest in a common content. Distance technology can be used to increase or decrease the amount of structure and dialog in the teaching-learning transaction. In this case, distance technology was applied by the Training Department to Training System 1 to create Training System 2.

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Cognitive style is a distinctive and habitual manner that an individual uses to organize and process information. According to Witkin and Goodenough (1981), there are two defined cognitive styles: field dependence and field independence. Field dependent people use a global, holistic approach to learning while field independents use an analytical, linear approach to learning and problem solving. Cognitive style is a psychological construct identified and validated by the work of Witkin and his colleagues (Goodenough, 1976). It was measured in this study by their instrument, the Group Embedded Figures Test (GEFT) (Witkin, et. al., 1971). Research on cognitive style suggests that field dependent learners tend to be socially oriented, prefer collaboration, are female, and are extrinsically motivated. Field independent learners tend to be analytical, rely on self-structured situations, prefer competition, are male, and intrinsically motivated (Witkin, et. al., Shih, et. al., 1998).

Research Problem and Questions

The major issue of concern in this evaluation research study was: *Which delivery system is more effective in achieving the training as well as the organization's objectives?* This is a difficult problem for any field research, were there is little experimental control over internal and external threats to validity. Likewise, the participants in this study were only those who were still one the job after one year of going through the training. It was important to see if these two groups differed significantly on certain characteristics. Only limited data was available on those that had exited the organization. The major research questions were:

1. What are the characteristics of the two groups on the following measures: age, gender, years of experience (work, sales and industry), education, amount of interaction, and cognitive style?
2. Is there a difference in the overall satisfaction with the content and quality of the training between the two groups?
3. Is there a difference in learning as rated by both the trainees and the instructor/manager between the two groups?
4. Is there a difference in the behavior or individual performance as a result of the training between the two groups?
5. Is there a difference in the total performance and retention rates between these two groups?

Research Design

The research design was a static group comparison, which is considered a pre-experimental design by Campbell and Stanley (1963). Again, the Kirpatrick's (1996) Four Levels of Evaluation format was adopted for this study.

Population

Participants who were trained in the first half of 1997 were the population selected. Managers were asked to secure participation from the trainee in their office for this study. 78 out of 119 trainees in the manager-led training and 136 out of 408 trained in the corporate instructor-led system actually participated in this study. This time frame was selected since it had the same corporate instructor across all classes; and little change in the instructional content was introduced into either system. The data collected were only from trainees still with the organization after one year of employment. Table 1 describes the characteristic differences between the two groups.

First, there were significantly more men than women trainees. Training Group 1 had 87 or 64% men compared to 49 or 36% women. Training Group 2 was more evenly distributed, but still had 45 or 58% men and 43 or 42% women. Second, the descriptive statistics noted in Table 1 above indicate there are some other differences between the groups. Training Group 1 appears to have less sales and industry experience, more education and lower GEFT scores than Training Group 2. Statistical significance at the .05 level would indicate the two groups differ on sales and industry experience, education, and GEFT scores even though they do not differ significantly on age or overall years of work experience. Overall, there was no significant difference in the hours of interaction recorded by either group. A score of 12 or higher tends toward field independence and the reliability coefficient of the GEFT is .82 (Witkin, Oltman, Raskin, Karp, 1971).

However, the following comparison group results suggest that there were no significant differences between the two groups of trainees on satisfaction with the training program, learning as perceived by the trainee, and job behavior. Differences between the two groups were statistically significant at the .05 level for learning as

perceived by the corporate instructor versus the managers' ratings. Also, there were differences between retention rates and overall performance for the two groups.

Description of the Trainee Population

Variable	Mean TS1	Std. Dev.	Mean TS2	Std.Dev.	T-test	Sig. (2-tailed)
Age (#years old)	41.8	9.1	39.4	10.4	1.56	.120
# Years Experience						
Work	16.8	8.1	14.7	10.4	1.51	.132
Sales	4.6	6.4	7.1	7.7	-2.43	.016 *
Industry	1.9	3.1	3.4	5.7	-2.03	.043 *
# Years Education	16.5	1.7	15.1	2.7	3.92	.000 *
# Hrs. Interaction	30.3	29.1	24.2	27.6	1.54	.126
GEFT Score	11.3	4.4	13.3	4.8	-2.91	.004 *

* Notes Significance at $\alpha = .05$

Table 1: Comparison of Means for Characteristics of the Two Groups Training Under System 1 versus 2

Results and Findings

Level One: Reaction => Satisfaction with Training Program

Reaction refers to the trainees' perception of the worth of the training activity (Kirkpatrick, 1996). Training participant reactions were recorded as their satisfaction with the content, quality, and delivery of the training. Reactions were measured in this evaluation as a total score on the BAET Evaluation form. The evaluation contained both quantitative and qualitative measures. The quantitative measures were 15 items, rated with a Likert scale of 1-5, which focused on the satisfaction. The reliability coefficient alpha for the BAET calculated by SPSS was .86.

Statistical results indicated at the .05 level that the two groups did not differ significantly on their overall reaction to their training experience. Those trained by managers using videotapes had a mean satisfaction score of 55.28 versus a 55.97 for those trained by the corporate instructor under videoconferencing. See Table 2 for the comparison.

Training Satisfaction Score

Training System	Mean	Std.Dev.	T-test	Sig. (2-tailed)
1. Manager-led, Videotape	55.28	10.31	-.381	.704
2. Corporate Instructor-led, Videoconferencing	55.97	11.31		

Table 2: Comparison of Trainees' Satisfaction Score in Training System 1 and 2

Level Two: Learning => Self and Manager vs. Instructor Ratings

Learning refers to the acquisition of the necessary knowledge and skills to perform the job. For the job of an account executive, conceptual and process knowledge has to be understood. Second, knowledge and demonstration of sales and computer skill has to be acquired. A variety of factors effect whether the trainee can or will learn the material presented in training. These factors include the learner's experience, motivation, aptitude and attitude toward what is to be learned. The work environment and the appropriate tools can also effect learning outcomes. Learning was measured using the trainee's self-rating on the BAET Evaluation and the instructor's or

managers' rating using the same scale. Both ratings are considered subjective measures. The BAET Likert rating scale was:

1=Poor *2=Fair* *3=Good* *4=Very Good* *5=Excellent*

Results indicated at the .05 level that there were no significant differences between the trainees' average learning rating of 3.81 versus 3.65 for Training System 1 compared to 2. Again, this average represents how the trainees' perceived and assessed their own learning. However, there was a significant difference at the .05 level in how the managers and the corporate instructor assessed their trainees' learning. The average rating by the managers in Training System 1 was 2.33 and the average rating by the corporate instructor was 1.72 for trainees in Training System 2. See Table 3 for the comparison. Speculation for the differences in manager and corporate instructor ratings is discussed in the Conclusion.

Trainees' and Manager vs. Instructor Measures of Learning Outcomes

Training System	Learning Rating by	Mean	Std.Dev.	T-test	Sig. (2-tailed)
1. Manager-led, Videotape	Trainee	3.81	.82	1.39	.167
	Manager	2.33	.63	5.81	.000*
2. Corporate, Video-conferencing	Trainee	3.65	.81		
	Instructor	1.72	.63		

* Notes Significance at $\alpha = .05$

Table 3: Comparison of Trainees' and Managers' vs. Corporate Instructor's Learning Ratings in System 1 and 2

Level Three: Job Behavior => Actual Performance on the Job After One Year

Job behavior refers to the degree to which the knowledge and skills learned in the training transferred to the job. In this study, performance on the job was measured as the total number of placements and dollar billings after one year on the job. These are the two individual job performance measures expected of an account executive.

Results again indicated that there was no significant difference at the .05 level between the average number of placements and the average dollars billed between the two groups. Those who went through Training System 1 had an average of 6.2 placements and billed an average of $71,635 while those in Training System 2 had an average of 5.5 placements and billed an average of $76,389. See Table 4 for the comparison.

Actual Job Behavior as Measured by Placements and Billings

Training System	Job Behavior	Mean	Std.Dev.	T-test	Sig.
1. Manager-led, Videotape	Placements #	6.19	5.19	.952	.342
	Billings $	$71,635	$ 59,037	-.306	.760
2. Corporate, Video-conferencing	Placements #	5.48	6.69		
	Billings $	$76,389	$152,405		

Table 4: Comparison of Trainees' Job Behavior in Training System 1 and 2

Level Four: Organization Results => Retention and Collective Organizational Impact

Organization results refer to the degree to which a training effort supports business objectives. Organization results are the reason for using training. Account executives perform a critical role for the

organization. Their collective competence as professionals has lead to the company being identified as the industry leader. Although difficult to isolate training as the critical factor, and to measure all organization performance outcomes, some effort to capture impact is important. In this study, results were measured by the total placements and billings over one year (1997-98) for Training System 1 and 2. Those trained by managers with video (n=119) produced 631 placements and billed $7,306,744.00. Those trained by the corporate instructor over videoconferencing (n=409) produced 1,370.5 placements and billed $19,097,316.

A per desk average, or PDA statistic, was also calculated to determine which training system performed better overall. PDA is a corporate, year-end statistic currently used by the company to measure and compare office performance. In this case, it was used to measure and compare training system performance. It is calculated as the total placements and dollars billed divided by those remaining with the organization at the end of the year. Those trained by the manager-led system had a PDA of 8.1 placements and $93,676.21 in billings. Those trained by the corporate system had a PDA of 10.1 placements and $140,421.44 in billings. In this study, Training System 2 performed 33% higher in comparing the PDAs of the two groups.

Retention is another measure used to assess impact on an organization. A retention rate for each training system was calculated. Retention was the total number of account executives who remained on the job after one year and participated in the study divided by the total number of participants that went through the training system. Results indicated a rate of 66% for Training System 1 and 33% for Training System 2. See Table 5 for a comparison of total placements, billings, per desk averages, and retention rates for the two groups.

Overall Organizational Results

Training System	n of N	Total # Placements and $ Billed	Per Desk Avg. (PDA)	% Retention
1. Manager-led, Videotape	78 of 138	631.0 - $ 7,306,744	8.1 - $ 93,676	66%
2. Corporate-led, Video Conferencing	136 of 409	1,370.5 - $19,097,316	10.1 - $140,421	33%

Table 5: Comparison of Trainees' Total Placements and Billings with Retention Rates in Training System 1 and 2

Conclusion

Both systems of training are effective in meeting the training and organizational goals of the company. The data suggests that both training systems are equally effective at achieving trainee reaction, learning, and job performance objectives from the perspectives of the trainees. However, in comparing the managers' and the corporate trainer's learning evaluation scores of the trainees, there was a significant difference. Likewise, at the organizational level we observe the two training systems contributing to organizational performance, but in different ways. Both are effective at eliciting different outcomes that are important to the organization. Training System 1 excels in retention and Training System 2 trains more people, produces more placements, higher dollar billings, and higher PDAs.

Which delivery system is <u>more</u> effective in achieving the training as well as the organization's objectives?

Based on the data collected from the first three levels of this evaluation, both groups of trainees' reactions or satisfaction, learning, and behavior measures all appear to support that trainees were satisfied with their training experience and understood and performed the training objectives. Although both training systems were able to meet the training objectives, differences in learning ratings by the managers versus the corporate instructor were observed. Also, overall organizational results and performance outcomes were different as noted in total placements and billings, per desk average results, and retention rates.

To address the difference in learning rating by the corporate instructor versus the managers, perhaps managers that have to train new hires are more careful in their selection process, and want to hold on to marginal or average performers for the long-run. It is also possible that these managers have a more difficult time letting a

trainee go who is at least producing something, due to the personal investment the manager made in training them. On the other hand, the corporate instructor is not able to develop a personal relationship with the trainer as the manager. Maybe the distance between the corporate instructor and trainee allows him to be more objective. Therefore, his average rating of trainees' could reflect why there is a lower retention rate. It is possible that managers who send their trainees through Training System 2 are not as careful in their selection process or as involved in the training as they should be. It should also be noted that the corporate instructor does not have control over the work environment.

On side of Training System 2, the production from those trained resulted collectively in more total placements and higher billings. Training System 2 is simply able to train more people. Although retention is lower, the training allows some participants to produce something before they exit the firm. Another speculation is that the lower retention rate may be a sign that any participant who is not a "good match" can make a decision to exit the business much more easily in Training System 2. Perhaps the training style, or distance of the instructor to the trainee, also effects retention. If the training style of the corporate instructor was not congruent with the cognitive style of the learners, then more trainees may leave. There are also a number of factors that can explain the retention rate that are not related to training. These include the individual owner's and/or manager's strategy, compensation structure, the management practices, the individual office environment and/or the trainees personal goals and motivation. Supervised feedback and personal involvement of the manager in training is critical in both systems.

Implications for HRD and Notes for Further Research

Evaluation contains the word "value" in it. Values stated in this organization's mission statement are: *to be a global network ... and the world's preferred and pre-eminent provider of....* Currently they are the industry leader. Both training systems support company's mission; however, Training System 2 may have more benefits. Since "value" can be defined as merit in both economic terms and character qualities, both training systems show no significant difference between trainees' average satisfaction, learning, dollar billings and number of placements. Economic value is achieved by account executives performing their jobs. The company's character can be measured by the trainees' satisfaction with the training and their learning outcomes that lead to professionalism in the field. Ultimately, individual performance is the outcome that leads to desired organization results. Both training systems support the development of account executives who can provide their customers with the solutions they desire.

In comparing the two training systems, effectiveness has been achieved by both systems without any significant difference at the first three levels. However, when looking at organizational impact, new questions are raised. *Is training more participants who don't stay, good for business in the long run? Which training system is more efficient in terms of actual costs and financial benefits?* The concept of efficiency could be explored further to find out which delivery system is less costly to the organization. This issue can also be looked at in terms of the actual costs of the manager's lost revenue generating time compared to the instructor's time training plus the cost of videoconferencing technology.

Another interesting outcome appeared in the trainees' qualitative evaluation comments. From those involved in the videoconferencing system, almost all trainees' responded positively to the question "Do you feel the videoconferencing technology helped or hindered your learning?" In addition, of the 136 responses, 56 mentioned the ability for "more interactions" with other offices and 42 described the ability to better develop a "network". This issue should be explored further as part of the company's mission is to be a "Global Network". *Which system better supports building customer and office relationships - and a global network?*

Likewise, given the overall gender and cognitive style of trainee participants that are retained by both systems tends toward males and field independence. Perhaps a sales job, such as this, is male dominated and requires field independence to be successful in the training and the job. Research suggests that the greater the fit between the training system and the learner's style, the more effective training is likely to be (O'Conner, Bronner, & Delaney, 1996). Currently, most trainees do not have the choice as to which system they are trained under. The issue of cognitive style matched to training system will be explored further.

With respect to distance technology, more needs to be understood about interaction, course structure and cognitive style for HRD practitioners and researchers to understand how individual and organizational performance can be improved with training and other organizational development interventions. The development of distance and communication technologies spurred by the Internet and videoconferencing are taking off (Imel, 1998; Schlosser and Anderson, 1994). Weinstein (1997) suggests that the appeal of these technologies is the interactivity of the teacher and students and their ability to share text, graphics, audio, video, and virtual reality experiences despite physical separation. In this study, interaction was required by the training objective and the amount of

interactivity was not statistically different for either system. There was a difference in the way the training was structured and the cognitive styles of the two groups. Finally, further exploration of the qualitative comments from this study may shed light on the concept of network and relationship building and the impact of these on a sales job. The important issue is how distance technology can support individual performance on the job and organizational outcomes. This study begins to suggests that with careful attention to training objectives, interaction, course structure, and cognitive style, that distance technology can be employed to deliver individual and organizational performance.

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Developing an Instrument to Measure the Use of Play-Based Training Methods in Healthcare Education

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This paper reports preliminary findings from an ongoing instrument development and validation study of the use of play-based training methods. The research project involved the use of the survey with healthcare educators to establish reliability and validity and the development of emerging norms for each scale.

Keywords: Play Theory, Flow Theory, Training Methods

The healthcare industry requires an overwhelming amount of mandatory training and this list continually grows longer. Many workers are experiencing what Rowell and Spielvogle (1996) call "educational overload." Enthusiasm for learning new skills or updating old ones has decreased and people are basically tired of boring presentation methods. However, information and technology change quickly and competency must be maintained.(Resko and Chorba, 1992). Classic classroom teaching methods have been used in the past to meet this objective, but frequently make the learning process tedious, monotonous, and boring.

Healthcare educators are similar to educators in other industries -- they have often used lecture based instructional methods. Since its inception from the Germanic tradition in the mid-19th century, lecture has been the principle means of transmitting knowledge from scholar to student (Waggoner, 1984). This method has been dubbed the "chalk and talk" approach by Bassi, Cheney, and Van Buren (1997). Despite changes in technologies and recent advances, educators still cling to the perpetuation of the lecture technique (McAlpine, 1996; Bassi, et al., 1997). However, as healthcare educators and other professionals find themselves faced with changing demographics in the classroom (younger and older participants) and increasing responsibilities for assuring competency (JCAHO, 1997), they must seek alternatives to the traditional lecture method if they are to both hold learner's interest and also motivate learning.

The use of play-based instructional methods, such as games or toys or characters, is an emerging interest among participants and trainers alike. However, it appears that their use among educators is limited. Training's 1997 Industry Report indicates that 94 percent of respondents are using traditional classroom programs with a live presenter.

In meeting the changing educational needs of healthcare workers, educators must be motivated to seek more creative ways to teach participants. In describing creative people, Csikszentmihalyi (1996) points out that creative people differ in many ways but they are unanimous in one respect: "They all love what they do" (p.107). It is not money or fame that drives the creative person; it is doing the work they enjoy. He goes on to describe creative individuals as most enjoying activities that allow them to design or discover something new.

Robinson and Stern (1997) state that corporate creativity is often limited by organizations that do not recognize the preconceptions "about who will be creative, what they will do, and when and how they will do it" (p.20). Many healthcare educators often do not use play-based training methods because of underlying organizational and personal constraints. These constraints may cause educators to miss the opportunity to be creative. Thus, they miss giving participants exciting and challenging learning experiences.

Designing and delivering training that will invoke a flow experience, as described and defined by Csikszentmihalyi (1990), requires creativity by the educator. By stifling creativity healthcare organizations may actually be preventing educators from reaching a state of flow. The flow experience is described as having nine main elements: 1) there are clear goals every step of the way; 2) there is immediate feedback to one's action; 3) there is balance between challenges and skills; 4) action and awareness are merged; 5) distractions are excluded from consciousness; 6) there is no worry of failure; 7) self-consciousness disappears; 8) the sense of time becomes distorted; and 9) the activity becomes autotelic (Csikszentmihalyi and Rathunde, 1993). A state of flow in educators may lead to the use of more involving and creative teaching techniques and thereby enhance learning.

The theoretical framework for this study is a result of a thorough review of the literature related to adult education, training and development, healthcare education, business education, flow theory, and play theory. The review of the literature revealed numerous positive reasons, benefits, for educators to use play-based instructional

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methods in their classroom presentations. It is agreed among trainers that adding fun and humor to presentations helps to promote motivation, cooperation, interaction, competition, involvement and communication (Ramanos, 1978). Using play in training has also been documented to reduce stress and tension, foster learning and creativity, encourage success, and enhance communication among co-workers (Halmo, 1985; Williamson, 1993).

However, educators do not use play-based instructional methods because they are sometimes limited by organizational and individual constraints. We are socialized to believe that play for adults is inappropriate (Rieber, 1996). The attitudes in the organization often reflect that adults should not play because play is for children and work is for adults (Bowen, 1987; Csikszentmihalyi, 1975; Rieber, 1996). In addition to negative beliefs about adult play many educators believe they do not have the resources, such as computer skills, graphic skills, time, or money, to develop and use play-based instructional methods (Coppard, 1976; Jacobs and Baum, 1987).

Identifying perceived benefits and constraints will be helpful to promote the use of play-based instructional methods. Including experience of flow adds another dimension that explores the educator's satisfaction and intrinsic motivation to use play-based training methods. The literature on flow theory suggests that individuals engaged in challenging and intrinsically motivated activities are more likely to enjoy and gain greater rewards from their work.

Research has shown that those who engage in activities that result in flow experiences tend to be more creative (Csikszentmihalyi, 1996). Creative individuals have been described as being playful people who are often uninhibited in their thinking and behavior (Lyman, 1989; Slesinski, 1991). This playful attitude often stimulates the creative ideas that improve performance, productivity, and profits in organizations (Berg, 1995). Educators in the classroom are also striving to improve performance, productivity, and profits but they must do it directly by their own work and indirectly by the work of those they teach and train. The effectiveness of training is vital to increasing performance, productivity, and profits. It is not suggested that training be "trivialized" with play but it should be recognized that play is an essential part of our continued intellectual and emotional growth that can be stimulated in the classroom (Jacobs and Baum, 1987).

Drawing from the literature review, an exploratory model of the use of play-based training methods is proposed. This model includes two use factors (constraints and benefits) and one factor for flow experience. Several personal and organizational background variables are also included.

Research Questions

1. What play-based instructional methods are healthcare educators most frequently using?
2. What are the most frequently cited constraints that prohibit healthcare educators from using play-based instructional methods?
3. What are the most frequently cited benefits that encourage healthcare educators to use play-based instructional methods?
4. To what extent do constraints to using play-based training methods, benefits to using play-based training methods, flow experience, and selected background variables separately explain the observed variance in healthcare educators' use of play-based training methods?
5. To what extent do constraints to using play-based training methods, benefits to using play-based training methods, flow experience, and selected background variables jointly explain the observed variance in healthcare educators' use of play-based training methods?

Methodology

Because there is little empirical research on the use of play-based training methods, no suitable existing instrument was found to use in this study. The items to measure the variables "use of play-based training methods", "perceived constraints to the use of play-based training methods", and "perceived benefits to the use of play-based training methods" were developed by reviewing the literature, holding a group interview with healthcare educators, and conducting individual interviews with healthcare educators to a point of saturation. The dependent variable, "use of play-based training methods", in this study was defined as any playful, fun, or experiential instructional strategy that contributes to the development of learners through active involvement and enhanced motivation. The variable, "perceived constraints to using play-based training methods", was defined as barriers from within the organizational culture and/or personal beliefs of educators that do not support the use of play-based training methods (reasons why educators do not use play-based training methods). The "perceived benefits to using play-based training methods" variable was defined as benefits and motivations that encourage the use of play-based training methods (reasons why educators use play-based training methods).

The variable "flow experience" was measured using a variation of the Flow Scales, based on Csikszentmihalyi's research. These scales derived from the flow model ask participants to rate their last training session along 12 dimensions related to the flow experience. The ratings were made on a 6-point Likert scale. In theory, the person who is in the state of flow will describe the experience of designing and delivering training in terms of being very involved, having clear feedback, wanting to do the activity, not being bored, not making an effort to concentrate, and so on.

The pilot study was conducted by administering the survey instrument to the Georgia Society for Healthcare Education and Training (GSHET) members who are not members of the national organization, Health Care Education Association. According to a 1994 survey of national healthcare educators (Stein & Glazer, 1994) the healthcare educator tends to be "female, middle-aged, working in an acute care, urban setting, residing in a department of hospital wide education and training, and reporting to a vice president level" (p. 7). The 1994 survey indicates that most educators work in departments labeled hospital wide education and training and report either to a nursing or human resources administrative function. Titles include director of education, director of hospital education, director of nursing education, staff development coordinator, instructional specialist, nursing educator, hospital educator.

Results, Conclusions, and Limitations

The pilot study was used to fulfill 2 broad goals: 1) test data collection procedures and 2) test the instrument adequacy.

The mailed survey was sent to 120 GSHET members. Fifty surveys were received and 2 were returned from the post office for a 40% response rate with only one mailing. Only one survey was unusable. This individual left most of the survey blank and indicated that he/she was not yet doing this type of training. Overall, we were pleased with the collection process and believe it is working adequately. Our target return rate for the pilot study was 30 to 35 percent with only one mailing.

In terms of instrument adequacy, we conducted 3 separate sets of tests. First we examined the item frequency on all items. We did this to ascertain if the items were exhibiting sufficient variance. In our judgment, no item exhibited inadequate variance. In most cases all points on the scale were used. In a few cases this was not true but in no case did more than 80% of the variance fall on any 2 values. We considered it sufficient variance to discriminate across the sample. Second, we examined for possible redundancy within 3 of the 4 constructs that were relevant. We did correlation among all the items and examined the intercorrelations. We identified all pairs that had correlation in excess of .75 and then examined them for possible redundancy. In only one case on the construct constraints did we find redundancy. As a consequence we wrote one item to replace 2 items in the constraints variable. Thirdly, we ran coefficient alpha reliabilities on the 3 scales. All cases are considered adequate. Although, the constraints alpha may reduce slightly after removing the redundant item. Table 1 below reports the alpha coefficients for each scale.

Table 1. Scale Reliability Scores

Variable Name	Alpha
Flow Experience	.89
Constraints	.86
Benefits	.95

All alpha scores were acceptable, ranging from .86 to .95.

The pilot study revealed interesting information about the respondents and their organizations. The mean age for respondents was 46.6 and the median was 47. The mean years worked in healthcare was 23 and the median was 23.5. The mean years worked in healthcare education was 10.2 and the median was 10. The mean number of employees was 1455 and the median was 1000. Twenty-two percent of the respondents reported to nursing, 50% reported to human resources, and 28% indicated they reported to other areas. Fifty-two percent reported a bachelor's degree as their highest degree, 33% reported having a master's degree, 7% reported having a doctorate, and 7% reported having an associate degree. Respondents reported 61% having a degree in nursing, 15% having a degree in education, 2% having a degree in business, 9% having a degree in healthcare administration, and 11% other degrees.

According to survey responses many healthcare educators are using play-based training methods. The methods reported most often were icebreakers to introduce participants (43.5%), icebreakers to introduce content (45.7%), and joke or humorous stories (54.3%). No respondents indicated using magic tricks.

A more in-depth look at high and low scoring items helps to clarify how educators see the constraints and benefits to using play-based training methods and how they reported flow experience. Table 2 below presents these data

Table 2. High and Low Scoring Items by Variable

Variable	Mean	Highest Item	Lowest Item
Flow	4.60	"I clearly knew what I was supposed to do." [5.23]	"I was anxious." [3.74]
Constraints	2.84	"some healthcare topics are not suitable for play-based training methods." [4.46]	"play-based training methods are for children but not adults." and "play-based training methods are inappropriate for adult learners." [1.59]
Benefits	4.91	"play-based training methods actively involved learners." [5.30]	"play-based training methods enhance relationships outside the classroom." [4.49]

One limitation to this research is that it is being conducted with a very specific audience, healthcare educators in one state. Thus, the results cannot be generalized to all training and development professionals nor to all healthcare educators. Further studies should look at a more national sample of healthcare educators as well as other training populations. For example, do internal HRD professionals report more use of play-based training methods than do external trainers?

How This Research Contributes to New Knowledge in HRD

Numerous authors have published manuals and articles on how to create and use fun methods of training (Cohen and Jurkovis, 1997; Hemsath and Yerkes, 1997; Leeds, 1995; Newstrom and Scannell, 1980; Sugar, 1991; Steinwachs and Sugar, 1984; Walter, 1995) and some instruction has been given on how to incorporate these into healthcare settings (Deck, 1995; Fuszard, 1989). However, little empirical research has focused on educator's use of play-based teaching methods and the nature of play that is used in training and development.

A link between motivation and the need to play in the workplace is not well studied. So this study fills a gap in the literature by clarifying what healthcare educators do and what experiences lead them to experience a state of flow. Knowledge about playful activities and flow experience will help individuals identify which practices promote a state of flow and better utilize play in their training in order to enhance their own flow experience.

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HRD and Economic Development: A Mega Level Research Agenda

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Much of the HRD research is conducted at the micro (individual) or macro (organization) levels. It is seldomly conducted at the mega (societal) level. This paper presents an initial conceptual framework for a research agenda at the mega level with particular emphasis on the role of the state and the multinational enterprise in the national economic development process in developing countries.

Keywords: Economic Development, Human Capital, Multinational Enterprise

Scholars & researchers have attempted to categorize the various levels or targets of human resource development intervention and impact (Gilbert, 1978; Rummler & Brache, 1995; Kaufman & Watters, 1992). I found the use of the following three levels to be very helpful in conceptualizing the impact of HRD intervention. These are: the individual, the organization, and the society at large (see Figure 1). While most HRD literature focuses on the first two levels, it is the third level that is at the heart of this paper. What is the impact of HRD on the whole society? Does HRD intervention have a role at the mega level? Or, is this beyond the scope of HRD as an applied field of study?

Because of the enormity of this topic, I chose to limit my initial exploration to the context of developing countries (a.k.a., less developed countries, or LDCs) as they struggle for economic development and prosperity. Further, I chose to focus this exploration on only two aspects of the economic development effort. The economic literature indicates that there are six causes of economic development. These are: foreign trade, technological transfer, resource allocation, structural transformation, human capital formation, and savings and investment (Hagen, 1986; Loehr & Powelson, 1981). In this paper, the focus will be on examining the role of HRD in the relationship between the last two causes of economic development—that is, human capital and investment. This paper presents the theoretical foundations for exploring the HRD role in social and economic development as they are linked to individual expertise and organizational performance improvement efforts.

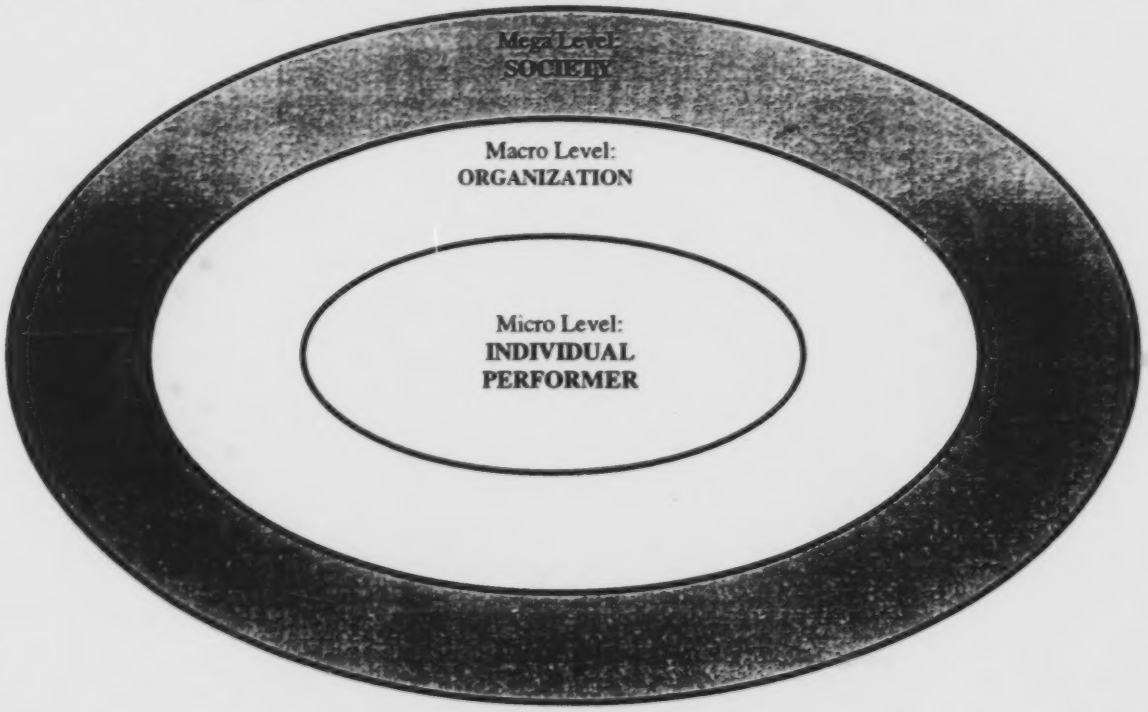

Figure 1: Levels of HRD intervention and impact.

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Statement of the Problem and Research Questions

The literature suggests that the successful and dominant companies of the future will be those who are able to capitalize on the knowledge and skills of the global workforce (Ashton and Green, 1996; Thurow, 1996). Thus, multinational enterprises (MNEs) will be competing among themselves [and between them and the domestic companies of a given country] for the recruitment and retention of highly skilled employees. However, will the MNEs be competing for this global workforce in the developing countries? Perhaps!

The international business literature shows that the majority of the MNEs operating in the world originate in the developed nations (Dunning, 1993). While some developing nations are more successful than others in bringing foreign investment into the country, the bulk of MNE investment remains in the developed world. Therefore, additional knowledge is needed in order to inform the LDCs—who are interested in MNE investment—in creating and implementing a strategy conducive to economic development through the appropriate approach toward educating and skilling their own workforce. This research agenda attempts to identify MNE attitudes toward LDCs, desired workforce characteristics, and emphasis placed on these characteristics in the process of selecting a particular country for possible investment in a new business venture. LDCs interested in attracting MNEs into their economies have to ensure that they have a workforce that is skilled and ready to meet the job performance requirements of these companies. So, what kinds of programs are developed and implemented by LDCs for the purpose of skilling the workforce to meet the domestic and international employment challenges of the 21st century?

The following are preliminary research questions:

1. What are the attitudes of MNEs toward the workforce in developing countries?
2. What are the characteristics of the labor force in LDCs that MNEs are looking for in the next century?
3. How much emphasis is placed on workforce characteristics within the MNE system when deciding on new investment ventures in a developing country?
4. Are LDCs planning and implementing *high skill formation* programs for the development of their workforce?
5. What are the characteristics of LDCs that choose the *high skill formation* as opposed to those who choose the *low skill formation* approach?
6. How are LDCs addressing the concerns of the non-traditional labor-force [women, older workers, people with disabilities, etc.]?

The following is a delineation of the conceptual framework and the theoretical underpinnings of the proposed research agenda.

Human Capital and HRD

The economic development literature identifies human capital formation as one of the critical causes of development. Human capital is defined as the productive investments in humans which include their skills and health that are the outcomes of education, healthcare, and on-the-job training (Todaro, 1994). The relationship between human capital theory and human resource development stems from their focus on the utilization of the labor force in the process of economic productivity in the broader sense of the term. Human capital theory is an economic theory that addresses the macroeconomics of production and economic development. It views humans—their knowledge, skills, health, and effort—as an integral part of the capital of a country which includes financial and natural resources. The basic premise of this theory is that investments made at the front end in educating and skilling the labor force (among other services such as nourishment and health) would pay dividends for a country in its effort toward economic development and viability and contribute to an increase in output per each unit of input (Hogendorn, 1996). The human capitalist approach studies the cost-benefit of such investment in terms of its efficiency in reaching equilibrium in the amount of investment in education as opposed to investment in other factors of production for the purpose of maximizing the magnitude of return-on-investment.

Similarly, HRD views humans as resources to be trained, educated and developed within the system of an organization for the purpose of enhancing the productivity of the organization through the expertise of its workforce. Jacobs (1990), Swanson (1995), and others have characterized HRD as a multidisciplinary field of study. They identified economics as an important discipline that contributes to the theoretical basis of HRD (see Figure 2). Economics in general and human capital theory in particular becomes important foundational ingredients for HRD theory and practice. In his first editorial for the commencement of the *Human Resource Development Quarterly*

journal (HRDQ), Swanson (1990) divided the contents of HRD into two camps: human development (psychology and education), and human capital (economics and management). This perspective also led to the financial forecasting and return-on-investment studies in HRD.

Carnevalle, Gainer and Villet (1990), taking a human capital approach, place HRD at the strategic level within the organization. They view employees as a resource that must be trained in order to maintain the competitive advantage of the corporation and increase its value. In this perspective, HRD activities, and specifically training becomes utilitarian in the organizational strategy to keep up with economic and technological changes. Therefore, linking training with specific job functions becomes the strategy for maximizing the return on investment. It is the economic potential and the economic rationale that provides the impetus for training in the workplace. Training is an integral part of the economic system whether we speak of organizational macro system or a national mega system. Here comes the confluence of the corporate strategy and the government economic development plan where the decisions for investments in the training and development effort and the educational system are based on considerations of the efficiency and cost-effectiveness of the proposition (see Figure 3). Hence, governments, in addition to their public educational systems, may provide corporations and other private institutions with investment and tax incentives for training and developing their workforces.

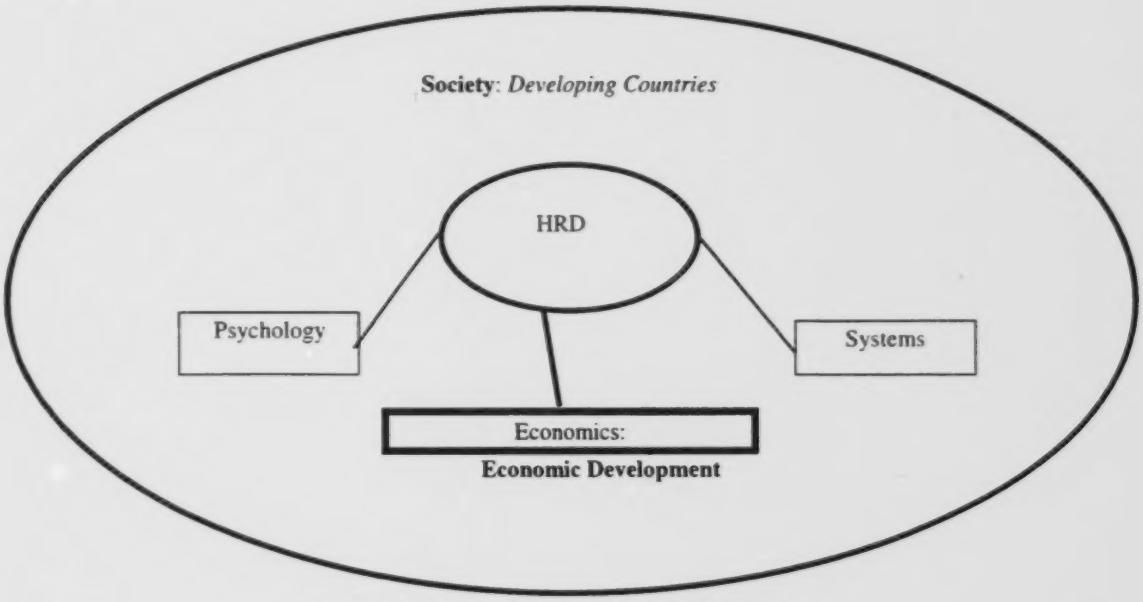

Figure 2: The role of economics in HRD Intervention.
Adapted from Swanson, 1995.

Multinational Enterprises and Developing Countries

Throughout history, capitalism has made its advances in human productivity on the basis of the exploitation of human labor, technological innovation, and the appropriation of vast material wealth; rarely through the education and training of the large majority of the workforce (Ashton & Green, 1996). However, as the twentieth century draws to a close, there seems to be "a consensus that the salience of a nation's education and training system is becoming the key item in the struggle for competitive [economic] superiority (Ashton & Green, 1996; p. 1). All the countries around the world, both developed and developing countries, seem to realize that the road to economic growth and development is tied to the skill formation of their human capital in order to improve the productivity of the labor force and thus raising the living standards of the population. Further, Thurow (1996) posits that countries who wish to develop and succeed in the future must begin to make long-term plans and commit major resources as investments in the education and the high skill formation of their society.

Marshal and Tucker (1992) assert that "The future now belongs to societies that organize themselves for learning. What we know and can do holds the key to economic progress just as command of natural resources once did ... The prize will go to those countries that are organized as national learning systems, and where all institutions are organized to learn and to act on what they learn" (p. xiii). According to Thurow (1996), in the past two centuries, the economic theory of comparative advantage directed companies to locate new business ventures in the world where natural resources and labor forces were abundant. Today, however, and for the next century, the comparative advantage rests with the knowledge and skills of the workforce. In fact, Thurow (1996) asserts that the successful companies in the next century will be those who can create, organize, and capitalize on the brainpower of the global workforce. Multinational enterprises play a major role in the global human resource development area both directly and indirectly (Dunning, 1993). Dunning (1993) suggests that multinational enterprises (MNEs) play an indirect role in the development of the workforce in that the countries will attempt to develop their domestic human resources to meet the potential needs of MNEs who may be prospecting for a new foreign direct investment (FDI) location. Also, MNEs, once established in a new country, become involved directly in further developing the skills of the foreign workforce they hire. However, Dunning (1993) concludes that the effects of the MNE activity on the eventual skill mix and quality of the workforce in a particular country are not clear.

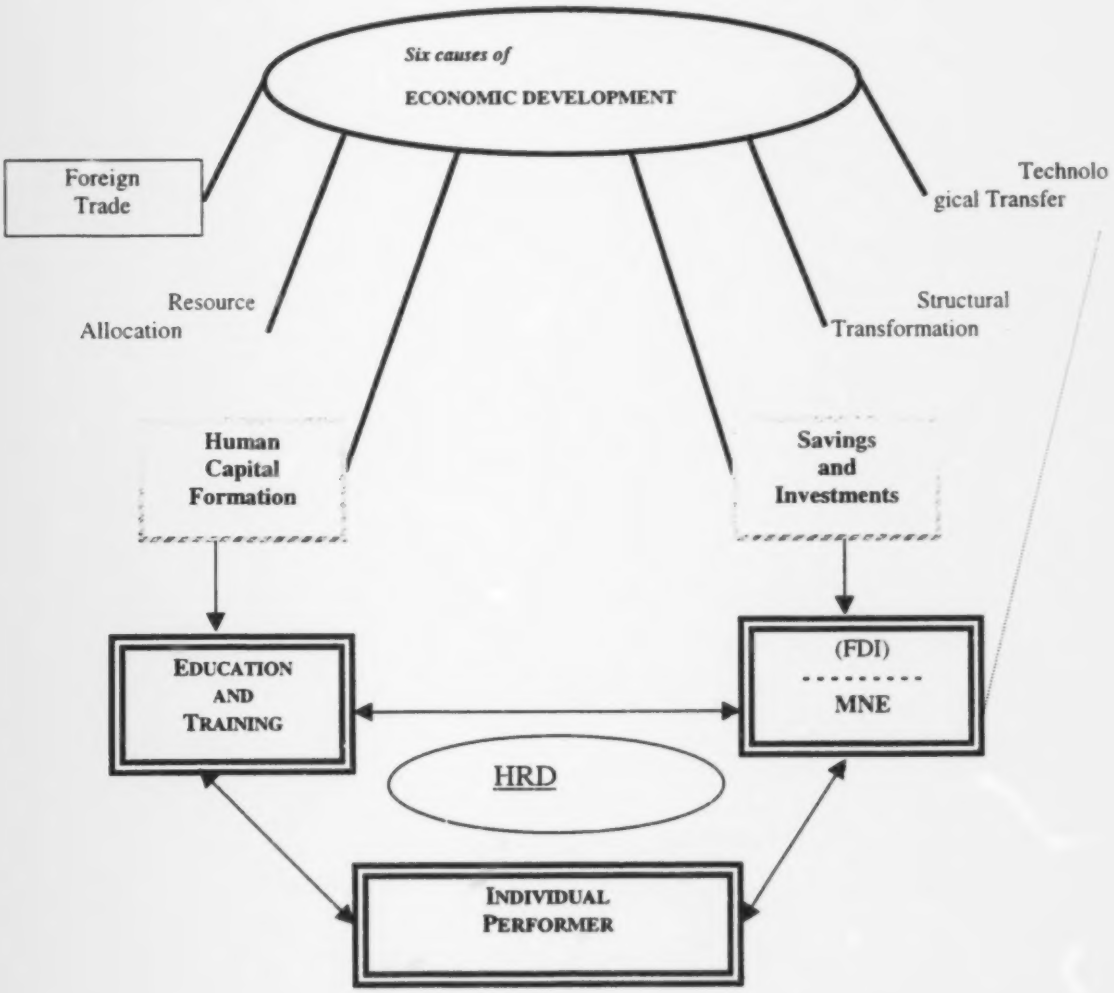

Figure 3: The role of HRD in economic development at the confluence of societal, organizational and individual levels.

Generally speaking, the literature suggests that, in its strategy for economic development, any developing country will need to develop, educate and train its human resources. A segment of these human resources will be prepared to meet the needs of prospective MNE investments. Also, MNEs will be searching the global market for new locations as prospects for their investment in production and service ventures. MNE decisions concerning their new venture locations will be affected in part by the availability of skilled human resources that will meet their needs (Bailey, Parisotto, & Renshaw, 1993). However, these LDCs can only guess what are the skill formation needs of the potential MNE ventures that may be seeking to start operation within their borders. Therefore, to be more effective in their educational and training programs, and to enhance their potential return on their investment in their human capital, LDCs [those who are interested in attracting MNE investments] need to have better information about the criteria that MNEs use in determining the readiness of the labor force in a particular country in terms of their skill formation.

Conclusion

I see this research as foundational in nature for the HRD field. In my view, human capital theory at the mega (societal) level complements HRD at the macro (organizational) level. In my attempt to develop a research agenda concerning the economic development prospects of LDCs, I believe that LDC governments must take a proactive approach toward creating an educational system that prepares the labor force for the global economy of the 21st century. This labor force then, in the systems view of the organization articulated by Rummler and Brache (1995), becomes one of the critical inputs for any organization (read economic entity) functioning within the boundaries of the respective LDC. At that point, HRD practitioners, in their focus on training and development, organization development, and career development, take the responsibility for enhancing the performance of the organization through the assessment of needs and the identification of gaps in performance at the organizational, workflow, and individual levels.

While I strongly believe in the viability of aforementioned perspectives, my philosophical views, influenced in part by my personal values and professional experience, compel me to keep in mind that the labor force we are discussing here is not merely an abstract concept or simply a form of capital or resource to be utilized for the planned and targeted ends of countries and organizations. This labor force is comprised of individual human beings who have their own goals, desires and aspirations. Therefore, because the human capital is different than physical or financial capital, and unique in that it has a will of its own, I believe that it becomes more difficult to determine the causal relationship between the actions of the HRD practitioners and the effects on the organizational outcomes, not to mention the ethical ramifications with regard to the individual employee.

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Improving Technical Training: The Effectiveness of Technical Subject Matter Experts as Trainers

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Technical subject matter experts (SMEs) are considered experts in technical subject matter; however, they may not possess the required level of proficiency for certain competencies to deliver effective training. This study investigated the issue surrounding the effectiveness of technical SMEs in the delivery of training. Three variables, experience, formal education, and professional preparation, were found as germane to trainer effectiveness. The findings suggest that all the indicated variables do not have a perceived impact on trainer effectiveness.

Keywords: Subject Matter Experts, Technical Trainers, Trainer Effectiveness

Technical training has emerged as an essential component within the organizational training structure and within educational practice. Technical training is defined as the most common type of skill improvement instruction, which is designed to increase the technological capabilities of workers (Sugar & Schwen, 1995). Research shows that an average of 91 percent of all training delivered in the workplace involves technical training (Lakewood Publications, 1997).

Due to the vast amount of technical training being delivered in the workplace, there is an obvious need for effective technical trainers. Unlike many of the generalist trainers working within human resource departments, technical trainers are often technical specialists who, the majority of the time, have been recruited from the technical ranks of the company. Rather than hiring individuals with a training background, organizations tend to recruit their resident technical experts and turn them into trainers (Kelly, 1995). Notwithstanding, as employers and employees face the challenge of new technologies in high performance work organizations, the need for cutting edge technical training is clear (Kelly, 1995, Segall, 1995).

Problem Statement

Utilizing subject matter experts (SMEs) as trainers has become a common practice in technology industries. Although these SMEs are knowledgeable in the technical subject matter content, it is likely that some do not possess the appropriate level of proficiency for required instructor competencies to deliver effective technical training to adult learners.

A major study in training and development (McLagan, 1989) identified the role of the instructor/facilitator and the required competencies for this role. The instructor/facilitator role consists of "presenting information, directing structured learning experiences, and managing group discussion and group process" (McLagan, 1989, p. 55). The competencies associated with the role are defined as "an area of knowledge or skill that is critical for producing key outputs" (p. 77). Specifically, the study identified that the instructor/facilitator should be able to exhibit an advanced level of expertise in adult learning methods and training and development theories and techniques methods in order to be effective. Hence, possessing the required level of proficiency for these competencies is a means to determine the effectiveness of technical trainers.

The possible lack of knowledge in adult education principles and training and development methods and techniques for SMEs in technical training can present problems for organizations. First, ineffective training delivery wastes dollars invested in instructors, training materials, and employee time. The costs of employees who have not been given the skills they need to utilize the technologies required by their jobs wastes additional dollars. Technical trainers who are not given adequate support in the delivery of technical training may cause employees to feel demoralized because they cannot apply the skills on the job (Clark, 1994). If technical trainers do not possess the competencies required to deliver effective technical training, then the result of the training could lead to negative consequences for the learner as well as the organization.

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The adult education literature validates the idea that the principles of effective practice and their implementation should characterize an adult educator (Galbraith, 1991; Knowles, 1984; Knowles & Hartl, 1995; Brookfield, 1986). Although the competencies have been clearly defined in the research literature (McLagan, 1989), many technical SMEs who deliver training are not required as part of their job description to possess these competencies. Some may actually perform the identified work of a technical trainer; however, they may not possess the required level of proficiency necessary to produce the work effectively. Hence, in order to improve the delivery of technical training, SMEs should be proficient in both technical subject matter expertise and the instructor/facilitator competencies. Thus, it was hypothesized that SME effectiveness will be positively related to the proficiency level of the identified instructor/facilitator competencies.

The purpose of this study was to determine if SMEs who deliver technical training perceive that they possess the required level of proficiency for the instructor/facilitator competencies. The framework for this study was the findings of McLagan (1989), a perception study which focused on competencies and role outputs. The study determined role competencies – the knowledge, skills, and abilities – individuals must possess to produce HRD work outputs (McLagan & Suhadolnik, 1989). Similar to the research design of the McLagan (1989) study, this current study measured instructor effectiveness by utilizing survey research of competency self-perception.

The Search for the Criteria of Trainer Effectiveness

An important part of this study was the identification of the criteria associated with trainer effectiveness. The literature indicates that a trainer plays different roles and that these roles must be clearly identified in order to conprehend effectiveness. Two studies were identified that focused on the characteristics of effectiveness based on the specific roles of a trainer: McLagan & Suhadolnik (1989) and IBSTPI (1988). The research findings given in *Instructor Competencies: The Standards* (IBSTPI, 1988) provided a set of core competencies that an instructor should demonstrate to successfully complete an instructional assignment. Likewise, the research findings presented in *The Research Report* (McLagan & Suhadolnik, 1989) define the competencies one must possess in order to be considered effective in the role. Therefore, this research clearly gives a framework of assessing the different roles of a trainer by utilizing the competencies for each role.

In the formation of a conceptual framework, the concept of SME in the role of technical instructor/facilitator effectiveness was designated as the dependent variable. As factors that might be significantly related to the development of a SME in the role of technical instructor/facilitator, the independent variables of (1) formal education, (2), adult education or training and development professional preparation and (3) experience were identified to be most germane to this study. In order to determine whether or not a subject matter expert can be effective in the role of technical instructor/facilitator, a conceptual model was developed that consists of the work outputs (products and services) and the competencies of the subject matter expert in the instructor/facilitator role (Figure 1).

The literature search identified several criteria for effective trainers. However, no study indicated a direct relationship between trainer effectiveness and experience, academic degree or certification, or instructor preparation. While there are no studies that indicate a relationship between the effectiveness of a SME in technical training delivery and the indicated variables, the literature suggests that both professional development in adult education or training and development would assist technical SMEs in becoming effective instructors (Chance, 1995; Castner & Jordan, 1989; Kaeter, 1995; Marsh, 1995; Trautman & Klein, 1993). Although these variables may contribute to the effectiveness of an instructor, the literature did not advocate them as requirements. When the scope of the literature review was narrowed to SMEs as technical trainers and technical training delivery, the review of the literature identified no studies and a paucity of articles on the subject. This information provided the rationale for identifying formal education in adult education or training and development, and instructor professional preparation (train-the-trainer workshops or adult education and training and development courses), as independent variables in this study.

In consideration of the possible relationship between the effectiveness of SMEs in the delivery of technical training and the amount of experience in the instructor role, little research could be found to support or deny this relationship. One study (Falkman, 1990), identified a possible relationship in these variables. This study determined that more experienced trainers were better able to deal with adults as learners than those with less experience. The results of the Falkman (1990) study seemed to give evidence in the literature to support instructor experience in the instructor role as a variable for study.

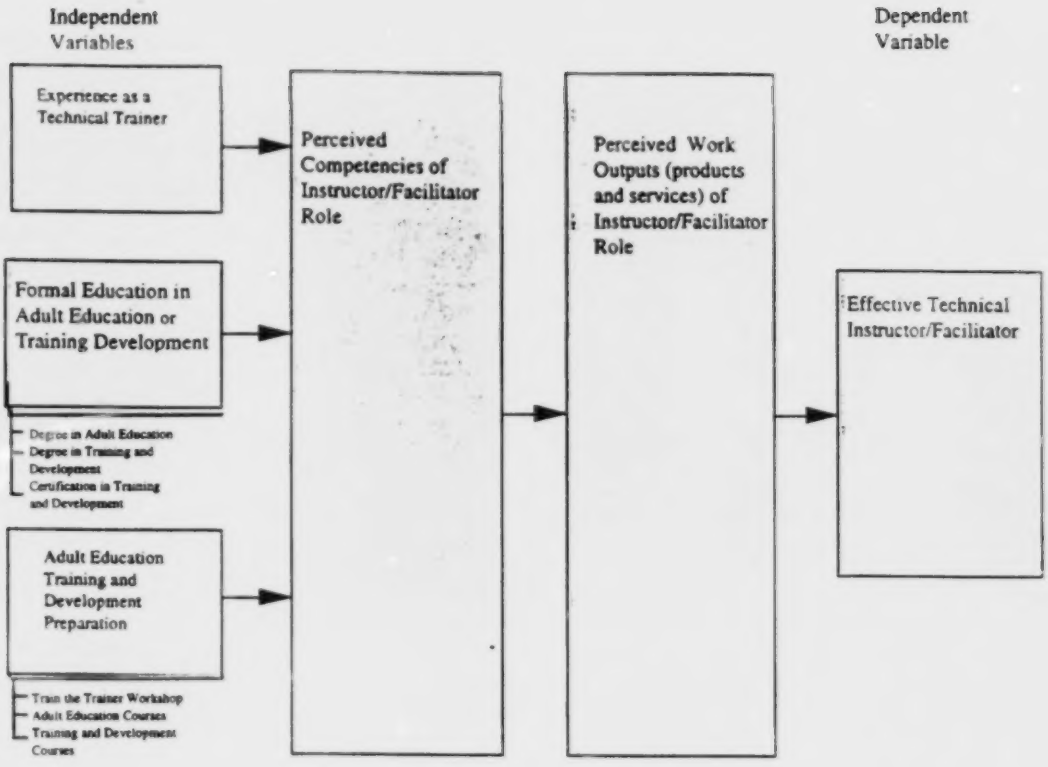
Independent Variables
Dependent Variable
Experience as a Technical Trainer
Formal Education in Adult Education or Training Development
Degree in Adult Education
Degree in Training and Development
Certification in Training and Development
Adult Education Training and Development Preparation
Train the Trainer Workshop
Adult Education Courses
Training and Development Courses
Perceived Competencies of Instructor/Facilitator Role
Perceived Work Outputs (products and services) of Instructor/Facilitator Role
Effective Technical Instructor/Facilitator

Figure 1. A conceptualization of variables and relationships depicting the effectiveness of Technical Subject Matter Experts as Technical Instructors/Facilitators.

Research Questions

From the review of the related literature, three components were established. They were (1) the criteria for trainer effectiveness in the instructor/facilitator role; (2) a conceptual framework for analyzing effectiveness; and (3) a conceptualization of variables and relationships defining the effectiveness of SMEs as technical instructors/facilitators. Based on the problem, purpose, and the review of the related literature, the following questions guided this study:

1. What self-reported level of proficiency do technical trainers possess for the competencies that define the instructor/facilitator role?
2. Is there a significant relationship in the reported level of proficiency and the respondent's academic degrees in education, certification, or other professional preparation in training and development?
3. Is there a significant relationship in the perceived level of proficiency needed for the required competencies and the number of years of experience in the role of technical trainer?

Methodology

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To evaluate the effectiveness of the SME in the technical instructor/facilitator role, a survey instrument was designed which followed the design of the McLagan (1989) study. The survey instrument was developed utilizing the work outputs and competencies for the instructor/facilitator role as defined in *The Models* (McLagan, 1989). The instrument, *Technical Trainer Practices Survey*, was a four-page questionnaire consisting of three parts. Part one collected data relative to the outputs produced by SMEs in technical training. In this section, there were seven categories of questions, each representing one of the work outputs of the instructor/facilitator role as defined by *The Models* (McLagan, 1989).

Part two collected data on the perceived proficiency of the instructor/facilitators relative to the identified competencies. A rating scale was used to gather these responses, beginning with zero being equated with having no perceived proficiency in the competency. A response of one or two indicated a perceived basic proficiency level for the competency; three and four represented a perception of intermediate proficiency level for the competency; five and six were equated with having an advanced level of proficiency for the competency. The competencies assessed were the fourteen competencies (the definition of each competency was provided) associated with the instructor/facilitator role identified in *The Research Report* (McLagan & Suhadolnik, 1989).

Part three of the survey collected demographic information for the technical trainer. The responses were used to categorize the respondents in terms of job title, number of years as a technical trainer, educational background, type of adult education or training and development preparation received, and previous job position.

Population and Sample

The study population consisted of 4,732 trainers who were members of the international American Society for Training and Development (ASTD) organization and identified their Professional Practice Area (PPA) as Technical and Skills Training and their job title as Specialist/Coordinator/Trainer. Systematic random selection of 500 names was conducted electronically by ASTD. The survey was mailed with a business reply envelope on three separate occasions to increase the response rate. A total of 165 surveys were returned, which yielded a sample response rate of 33%.

Measurement of Variables

The dependent variable in this research was SMEs perceived effectiveness in the delivery of technical training as measured by the total score received from the responses to the level of proficiency related to each competency. The three independent variables used were (1) number of years as a technical trainer; (2) formal education background; and (3) adult education or training and development preparation.

Respondents were asked to indicate the number of years they have been a technical trainer. The information provided was categorized into five groups: 0 - 1 year, 2 - 4 years, 5 - 10 years, 11 - 24 years, and 25 or more years. Level and type of formal education was determined from responses relating to educational background. The respondents were asked to indicate the year he or she received advanced degrees and their major course of study. To determine the type of adult education or training and development preparation received, each respondent was asked to indicate any relevant workshops, classes, or seminars in these areas. Data analysis processes included calculation of descriptive statistics on the demographic data, calculation of the frequencies and mean scores for each competency, and test for significant relationships between the variables.

Findings

Research question one was analyzed from the respondents' responses to their perceived level of proficiency in part two of the *Technical Trainer Practices Survey*. Respondents were asked to assess their perceived level of expertise in each competency for the instructor/facilitator role. As previously described, expertise categories were none, basic, intermediate, and advanced. With the exception of Objectives Preparation Skill and Questioning Skill, all respondents assessed themselves at the basic level or above for each competency (Table 1).

The mean score for each competency (Table 2) falls into the intermediate level of expertise range. Ranking the competencies according to mean score shows that the respondents assessed their presentation skills expertise ($\underline{M}$ = 4.90) higher than any other of the competencies. Conversely, the respondents' expertise in group process skill ($\underline{M}$ = 4.05) was ranked lowest of the competencies.

The analysis of research question two categorized the responses to the perceived level of expertise into three (3) categories for scoring purposes. The rating scales for perceived proficiency were 0 (no perceived proficiency), 1

and 2 (basic proficiency level), 3 and 4 (intermediate proficiency level) and 5 and 6 (advanced proficiency level). The statistical analysis (Table 3) indicated that there were no significant relationship in the perceived competency levels for the technical instructors/facilitators based on degrees in education, certification, or other preparation in training and development. The results from the data analysis (Table 4) of research question three revealed significant relationships in the competence level based on the number of years in technical training delivery. Hence, the data indicated a relationship in the level of perceived proficiency of technical instructors/facilitators based on the number of years in the instructor/facilitator role.

Table 1

Frequency Distribution of Level of Expertise for Instructor/Facilitator Competencies

Competency	None		Basic		Intermediate		Advanced	
	n	%	n	%	n	%	n	%
Adult Learning Understanding	0	0	16	10.5	74	48.7	62	40.8
Coaching Skill	0	0	6	3.9	83	54.6	63	41.5
Feedback Skill	0	0	4	2.7	76	50.6	70	46.7
Group Process Skill	0	0	20	13.2	70	46.0	62	40.8
Intellectual Versatility	0	0	14	9.2	58	38.2	80	52.6
Objectives Preparation Skill	1	0.6	8	5.2	58	38.2	85	56.0
Observing Skill	0	0	6	4.0	66	43.7	79	52.3
Performance Observation Skill	0	0	17	11.2	75	49.3	60	39.5
Presentation Skill	0	0	1	0.7	42	27.6	109	71.7
Questioning Skill	2	1.3	9	5.9	71	46.7	70	46.1
Relationship Building Skill	0	0	11	7.2	69	45.4	72	47.4
Self Knowledge	0	0	9	5.9	51	33.6	92	60.5
Subject Matter Expertise	0	0	3	2.0	54	35.5	95	62.5
Training & Development Methods & Techniques Understanding	0	0	14	9.2	60	39.5	78	51.3

n=152

Table 2

Mean Score for Each Competency

Competency	Mean	Rank	Self-Reported Competency Level	Required Competency Level (McLagan, 1989)
Presentation Skill	4.895	1	Intermediate	Advanced
Subject Matter Expertise	4.664	2	Intermediate	Advanced
Self Knowledge	4.559	3	Intermediate	Advanced
Objectives Preparation Skill	4.513	4	Intermediate	Intermediate
Observing Skill	4.497	5	Intermediate	Advanced
Relationship Building Skill	4.368	6	Intermediate	Advanced
Feedback Skill	4.360	7	Intermediate	Advanced
Training & Development Methods & Techniques	4.336	8	Intermediate	Advanced
Intellectual Versatility	4.296	9	Intermediate	Advanced
Questioning Skill	4.270	10	Intermediate	Advanced
Coaching Skill	4.224	11	Intermediate	Advanced
Adult Learning Understanding	4.118	12	Intermediate	Advanced
Performance Observation Skill	4.066	13	Intermediate	Advanced
Group Process Skill	4.046	14	Intermediate	Advanced

Table 3

Relationship Between Academic Degree Type and Proficiency Level

	Technical Degree		Education Degree		Total	
	n	%	n	%	n	%
Intermediate	31	34.4	4	33.3	35	34.3
Advanced	59	65.6	8	66.7	67	65.7
Total	90	100.0	12	100.0	102	100.0

$\chi 2 = .006$; df = 1; $p > .05$

Table 4

Relationship Between Experience Level and Proficiency Level

	Less than 5 Years Experience		5 years or More Experience		Total	
	n	%	n	%	n	%
Basic	1	1.9			1	0.7
Intermediate	27	51.9	19	19.4	46	30.7
Advanced	24	46.2	79	80.6	103	68.6
Total	52	100.0	98	100.0	150	100.0

$\chi 2 = 19.49$; df = 2; $p = .00006$; $p < .05$

Contributions to New Knowledge and Future Research Directions In HRD

The purpose of this study was to determine if SMEs who deliver technical training perceive that they possess the required proficiency levels for effectiveness in the role of technical instructor/facilitator. There are five key findings from this study.

First, based on the mean score for each competency, the extent to which the work outputs are produced by SMEs does not advance further than the intermediate level on average. Second, technical trainers with five or more years experience in the area of technical training delivery report a higher level of proficiency in the competencies for the instructor/facilitator role. Based on these findings, practical application of the competencies may increase perceived expertise level. Third, technical trainers perceive themselves to have the highest level of proficiency in presentation skills and subject matter expertise. Additionally, technical trainers perceive their level of proficiency in training and development methods and techniques and adult learning methods to be at an intermediate level of proficiency. Fourth, although the literature in training and development states the importance of instructor preparation through formal education in adult education or training and development, these factors have no perceived impact on the level of proficiency in relation to instructor/facilitator competencies. Finally, preparation in adult education or training and development has no perceived impact on the level of expertise in relation to instructor/facilitator competencies.

The findings of this study has contributed to new knowledge in HRD, specifically technical training in numerous ways. First, the findings demonstrate a relationship between the competency level rating and the amount of experience in technical training delivery. For instance, technical trainers with five or more years experience in the area of technical training delivery report a higher level of proficiency in the competencies for the instructor/facilitator role than those with lesser years of experience. These findings agree with the Falkman (1990) study that found that novice trainers have a difficult time in relating to adults as learners. Accordingly, practical application of the competencies appears to increase the perceived proficiency level.

Second, the training and development literature and the findings of this study agree that presentation skills are a critical competency for the subject matter expert acting in the role of instructor/facilitator in the delivery of technical training. However, effective presentation skills alone do not constitute effective technical training delivery. Effective technical training delivery is dependent upon the SME possessing an advanced level of expertise in the competencies for the instructor/facilitator role. Hence, an advanced level proficiency for all competencies can be regarded as an enhancement to the technical training efforts.

Third, this study provides evidence to support the position that SMEs in the role of instructor/facilitator who possess an advanced level of expertise in the competencies may also provide a higher level of technical training. This conclusion has direct implications for the workplace since efficient workplace practice and expertise is paramount in today's dynamic technological environment making effective training crucial to the continued success of an organization. Although the standard practice of recruiting resident technical experts and developing them as technical trainers should be addressed by organizations if they are to remain viable in today's marketplace, the more significant issue is one of degree. That is, if the technical trainer does not possess an advanced proficiency level defined by the McLagan (1989) research results, not only will the training suffer, but also, the organization will not be as competitive in the marketplace.

These issues demonstrate that the area of instructor recruitment is also vital in maintaining an organization's position in the marketplace. Since this study found that the number of years of experience is related to performance effectiveness, it stands to reason that employing SMEs with a minimum of five years of training and an advanced level of proficiency in the competencies would benefit an organization and improve technical training overall.

Future Research

This study was designed as an introductory exploration of technical SMEs leading to further research in instructor effectiveness. The findings of this study indicate issues that should be directed to future research. First, further exploration into measuring effectiveness of SMEs as technical trainers should be investigated. An examination of effectiveness by gathering actual performance data would further confirm the effectiveness of SMEs as technical trainers. Manager assessment, student perceptions, student achievement, or classroom audits are several options to obtain this effectiveness data. In addition, other contributors to effectiveness could also be examined.

An examination of the effectiveness of SMEs with no education or training degrees or preparation, before and after they have completed a training and development certificate program should be undertaken. The findings of this type of study could yield implications for the establishment of required certification programs for technical trainers in conjunction with other required technical and technology-based certifications.

Another area that requires further exploration in instructor/facilitator competencies are the values that an advanced level of proficiency adds to the learner and to the organization. Future research should examine the impact on the transfer of training based on the proficiency level. For example, the Falkman (1990) study determined that more experienced trainers were better able to deal with adults as learners than those with less experience. Although this current study found a relationship between experience and level of proficiency, the impact of proficiency on training transfer is an important topic for future study.

A final issue worthy of further research is the determination of whether or not the McLagan (1989) competencies are also applicable for technology-based training delivery. If the delivery methods are moving from instructor-led to technology based then what will be the competencies required of those practitioners in the instructor/facilitator role?

In sum, this research determined the variables which affect the effectiveness of the technical SME in the delivery of technical training. Effective technical SMEs can be identified in organizations as those who possess an intermediate level of proficiency in presentation skills and possess five or more years of experience in the delivery of technical training. Hence, the findings of this study indicate that in order to improve technical training, business and industry must consider factors other than technical subject matter expertise when recruiting technical trainers.

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Identifying the Skill Requirements and Performance Needs of Small Manufacturers

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Little is known about the employee skill requirements and performance improvement needs of small manufacturers in Northwestern Wisconsin. A survey was conducted to provide information on the needs of these manufacturers and to determine if a university-based performance improvement center would be of assistance to these companies in meeting the identified needs. The results of the survey are summarized and discussed in this manuscript. Conclusions are drawn, and recommendations for research and practice are provided.

Keywords: Performance Improvement, Performance Needs, Skill Requirements

Throughout the past two decades, numerous changes have occurred in manufacturing technology and production processes. In many companies, these changes have forced workers to obtain higher skill levels. According to a national survey, manufacturing employees now require greater skills in computer use, teamwork, decision making, problem solving and systems thinking to perform in the current work environment (Bassi, Cheney & Van Buren, 1997). This increased emphasis on technology, teamwork and knowledge management is expected to continue into the next century (Bassi, Cheney & Van Buren, 1997).

In many parts of the country, finding skilled workers for the manufacturing sector is extremely difficult, and providing employees with the skills they need can be costly to employers. In 1998, approximately 17 million production workers received an average of 30 hours of training, costing employers an estimated 19 billion dollars (Industry Report, 1998). Most of this funding was used to pay the wages of internal trainers or human resource development professionals. Technical colleges, community colleges and universities may also provide education and training to employees. Partnerships between manufacturers and educational institutions are becoming increasingly popular. In a recent survey by the Wisconsin Manufacturers and Commerce association, the technical college system was listed as the most important external resource for in-state employers and 24 percent of the respondents relied on four-year universities.

In Northwestern Wisconsin, where only 10 percent of the 371 manufacturers have more than 100 employees, few companies have internal training or human resource development departments (Franklin, 1998). In rural areas such as this, it would be logical for companies to utilize the services of the local technical colleges and university campuses to provide education and training for employees. However, highly skilled employees are just one component of performance. A comprehensive performance improvement system includes three levels of performance, individual, process and organizational, each with its own measurements and variables (Swanson, 1995).

In many small companies, owners and managers are busy maintaining their operations in a very competitive economy. They may lack insight as to how to implement a systematic approach to performance improvement that would encompass all levels and advance the organization beyond its current position. A university-based performance improvement center, led by faculty and staff with experience and expertise in performance improvement and human resource development, could assist small manufacturers in understanding performance and designing and implementing performance improvement initiatives. Currently, such centers are in existence in several universities with well-established academic programs in performance improvement and human resource development.

Research Questions

Little is known about the employee skill requirements and performance improvement needs of small manufacturers in Northwestern Wisconsin. This study sought to provide information on the following questions:

1. What are the employee skill areas that are perceived to have importance by small manufacturers?
2. What are the employee skill areas that are perceived to be in need of improvement by small manufacturers?

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3. What types of performance improvement initiatives are currently taking place in small manufacturing companies?
4. Is there a need for a university-based center that would assist small manufacturers in improving performance at the individual, process and organizational levels?

Methodology

Following a review of the existing research in this area, a questionnaire was developed and initially reviewed by a panel of faculty and staff members with expertise in performance improvement. The questionnaire contained demographic items such as size of company and job title of respondent. The main body of the questionnaire was divided into two sections. One section required respondents to rate various types of supervisory and employee skills as to their level of importance and the level of improvement desired. Skill lists were adapted from the *National Skill Standards for Advanced High Performance Manufacturing*, standards that were developed during a project that was commissioned by the U.S. Department of Education in 1997. In the second section, respondents were asked to describe current performance improvement initiatives in their organization. This section was designed in an open-ended format. The respondents could list and describe any current practice in their organization that was implemented to improve performance at the individual, process or organizational level. A final draft of the questionnaire was reviewed by small group of trainers and human resource directors in manufacturing companies.

A cover letter was developed and was then mailed with the questionnaire to a random sample of 200 small (fewer than 500 employees) manufacturers in the fall of 1997. Companies were randomly selected from a database maintained by the Northwest Wisconsin Manufacturing Outreach Center (NWMOC). Mailing labels and cover letters were addressed to the owners or presidents of the companies. By November 1997, following the initial mailing and a follow-up mailing, 49 companies, or 24.5 percent of the manufacturers, had responded to the questionnaire.

The data were analyzed by a staff member in the Technology and Information Services unit at the University of Wisconsin-Stout. Using SPSS-X software, frequencies and percentages were calculated for each item included on the survey. T-tests were conducted to determine if there were significance differences in the mean ratings of the two skill groups in importance or in need for improvement. The responses to the open-ended questions were summarized and categorized by the researcher.

There were limitations associated with this methodology. The population was limited to small manufacturers in Northwestern Wisconsin who were included in the NWMOC database. This is a largely rural area with a very homogeneous population and few cities that have a population more than 10,000. Therefore, the results may not be generalizable to manufacturers located in other parts of the state or other areas of the country. The 24.5 percent response rate also makes it difficult to generalize the results of the study. However, it was thought that additional follow-up mailings would do little to improve the response rate. Although the survey was targeted toward small companies, several of the respondents wrote unsolicited comments on their surveys such as "although I answered the questions, I believe our company is too small to do much in this area" or "with only 30 employees, most of this doesn't seem to apply to us." It was hypothesized that many of the companies did not respond to the questionnaire because they held similar beliefs.

Results and Discussion

In this section, the responses to each of the questionnaire items will be presented and discussed, beginning with the two demographic items: job title of respondent and size of company. Nearly half of the respondents were company presidents (47 percent). Other job titles of respondents included owners (14 percent); general, plant or operations managers (22 percent); vice presidents (1 percent); or other/multiple titles (16 percent). Many of the those in the "other" category held multiple titles, such as President/General Manager. The majority of respondents were from very small companies with fewer than 100 employees (84 percent). The remainder of the respondents were from companies with 100 to 250 employees (12 percent) or companies with 251 to 500 employees (4 percent).

Respondents were asked to rate the importance of 24 skills (12 supervisory/managerial skills and 12 employee skills) on a scale of 1 to 4 according to their perceived importance and the perceived need for improvement in each skill area (1 = little importance or little need for improvement and 4 = extremely important or great need for improvement). Table 1 presents the results of the supervisory/managerial skill ratings:

Table 1

Supervisory/Managerial Skills Ranked by Perceived Importance (N = 49)

Skill Area	Importance	Need for Improvement
Orienting new employees	3.36	1.92
Motivating employees	3.14	2.21
Appraising employee performance	3.12	2.23
Delegating responsibility	3.05	2.14
Solving problems	3.04	2.19
Managing operations	3.02	2.22
Providing feedback	3.00	2.24
Managing time	2.93	2.34
Managing diversity	2.83	1.37
Resolving conflicts	2.83	2.00
Managing projects	2.70	1.89
Training employees	2.48	2.08
	Mean = 2.70	Mean = 2.07

All of the supervisory/managerial skills were rated at least "somewhat" important by the respondents (2.0 or higher), and more than half of the skills (58 percent) were rated "very important" (3.0 or higher). Orientation of new employees receiving the highest importance rating (3.36) while training employees received the lowest importance rating (2.48.). Respondents indicated there was need for "little" to "some" improvement in all of the skill areas, with little variation across categories. There were similar patterns in the ratings of the importance and need for improvement in the 12 employee skills (see Table 2).

Table 2

Employee Skills Ranked by Perceived Importance (N = 49)

Skills Area	Importance	Need for Improvement
Working as part of a team	3.19	2.19
Making ethical decisions	3.09	1.70
Listening	3.07	2.18
Setting goals	2.95	2.30
Understanding quality	2.92	2.24
Writing	2.69	2.00
Managing stress	2.66	2.32
Using computer technology	2.62	2.00
Reading	2.50	1.66
Serving customers	2.40	2.22
Developing a career plan	2.07	1.65
Understanding of systems	1.88	1.88
	Mean = 2.67	Mean = 2.03

All but one of the employee skills were rated at least "somewhat" important by the respondents (2.0 or higher), yet only three of the skills (25 percent) were rated "very important" (3.0 or higher). Again, respondents indicated there was at least a "slight" need for improvement in all of the skill areas, with little variation across

categories. There were no significant differences in the mean ratings of the two skill groups, supervisory/managerial and employee, in importance or in need for improvement.

Thus, the respondents of this study were consistent with the current literature and with state and national research in this area as they rated 23 or the 24 skills area somewhat to very important for their employees. However, in contrast to the literature and national reports of low-skill employees unable to cope in today's high-tech manufacturing environments, the respondents in this study reported relatively little need for improvement in the skills of their employees. None of the 24 skills areas received a rating of 2.5 or higher indicating that there were no perceived needs for great improvement in any of the skill areas.

Approximately one-third of the respondents (32.7%) indicated they had implemented one or more performance improvement initiatives. Respondents were asked to describe these interventions in their own words. The responses include interventions directed at the individual, process and organizational levels and can be broadly categorized into six areas: strategic planning, physical infrastructure, quality improvement, training and development, individual performance management and other types of initiatives. Respondents could list multiple interventions (see Table 3).

Table 3

Performance Improvement Initiatives as Identified by Respondents

Organizational Level
Strategic planning
Establishing business objectives
Organizational goal setting by managers (2 companies)
New addition to facility - increase total space
Improvements in plant layout (3 companies)
Implementation of new computer system (2 companies)
Process Level
Continuous quality improvement program
Process improvement
Compliance with ISO Quality Standards (2 companies)
Quality control program
Standardized manufacturing criteria
Work flow improvements
Problem solving teams
Value-added manufacturing
Individual Level
Supervisory skills training program
Safety training (2 companies)
Training courses and seminars (3 companies)
Mentoring program
On-the-job training
Pay for performance
Performance evaluations (2 companies)
Annual performance agreements
Alcohol/drug testing
Other
Employee suggestion program, "Job Boss" Program, "5 Pillars of the Visual Workplace"

Although the 16 companies that considered themselves to have implemented performance improvement initiatives described a total of 35 activities, this list should not be considered an all-inclusive description of the initiatives that are occurring in these companies. It appears likely that individual perceptions of that could be considered a

"performance improvement initiative" varied widely. For example, it is widely accepted that on-the-job training (OJT) is a standard practice among small manufacturers although only one respondent included OJT in his response (Barron, 1997). The same observation could be made regarding safety training, performance evaluations and quality control processes. Finally, although only one-third of the respondents listed current performance improvement initiatives, more than half (51 percent) indicated they would consider using assistance from a local university in meeting their performance improvement needs.

Conclusions

Several conclusions may be drawn from the data that were collected in this study. The respondents of this study, primarily presidents and owners of small companies in Northwestern Wisconsin, indicated that the skills needed for supervisors and employees to be effective in the current manufacturing environment are somewhat important to very important for employees in their own organizations. Unlike employers in other parts of the state or other states in the country, there does not appear to be a shortage of needed skills or a perceived need for major improvement in any of the skill areas included in the survey given their current performance requirements.

However, the performance requirements for today's workplace can often be separated into two categories (Swanson, 1995). One category of skills deals with maintaining the existing organization. The second category of skills deals with improving the organization. It may be that employers are content with existing skill levels because current skill levels are adequate to maintain the existing company. In contrast, companies with aggressive performance improvement programs may find that employee skills need continual upgrading to deal with advances in systems and processes or to create new methods and products.

Two thirds of the respondents indicated that they did not have current performance improvement initiatives in place. Of the respondents who reported performance improvement initiatives, most provided only one or two examples of largely unrelated types of activities. There was no evidence of a systematic performance improvement program that included initiatives at the organizational, process and individual level at any of the responding companies. Thus it may be concluded that the respondents had a limited understanding of performance improvement and how performance improvement initiatives may be used strategically in their companies to improve productivity, quality or other areas.

Finally, more than half of the respondents indicated that they would consider using assistance provided by a local university to improve performance in their organizations. However, given the apparent match between employee skills and current performance requirements and the limited knowledge of performance improvement processes among the respondents, traditional approaches offered by technical colleges and universities, such as offering a series of employee training seminars, may be not be the most effective method to provide services to these organizations. Based on the data collected in this study, customized services, beginning with performance needs assessments and analyses, would appear to be a more effective approach.

Contribution to New Knowledge in HRD

Unlike large companies that often have resources for internal human resource development departments and external performance consultants, small manufacturers may have more limited knowledge and restricted access to individuals with formal expertise in performance improvement. Although the respondents, as presidents, owners and managers of companies, probably discuss performance issues on a regular basis, it is clear from the results that they share no common definition of the concept and no methodological approaches to improving performance in their organizations. Performance remains a mystery or even a threat to many individuals when they are asked to think about, explain, substantiate or improve performance in their organizations (Swanson, 1998).

Therefore, university-based centers that can assist small manufacturers with these issues may be providing valuable services, provided the organization is sincerely interested in initiating change. University consultants can best help small manufacturers by first facilitating strategic planning and challenging manufacturers to think systematically about improving performance before suggesting a number of interventions (Thompson, 1997). When the relationship has been established and trust has been built, the consultant may recommend a performance need analysis and, based on the results of the analysis, design appropriate interventions, including those related to training and human resource development. Continued assistance may be needed during the implementation and evaluation of interventions as small mangers may lack the knowledge and sophistication needed to effectively support the process (Brauchle & Wright, 1998).

The process described above, analysis, design, implementation and evaluation, has been used successfully with many organizations, both large and small. However, it is not a "one size fits all" approach. Many of the respondents clearly believed that their organization was "too small" to benefit from performance improvement theory or techniques, or they thought that there was little need for improvement in the skills of their employees. Research has proven that organizational design factors, including the size of the organization, may affect the success of performance improvement initiatives (Torraco, 1998). It may be that current models need to be adapted, or new models created, for very small companies.

Although respondents in this study saw relatively little need for improvement in the skills of their employees, probing questions from a skilled consultant may determine if the organization is operating at a "maintenance level" and if the performance could be enhanced through changes to the system. Through careful planning and analysis, employers may realize that skill levels they once believed adequate are no longer acceptable if they are to move beyond the maintenance level and require employees to become innovators and provide them with opportunities to improve their own individual skills, processes and work environment.

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The Relationship of Learning and Performance Improvement at Different System Levels

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The importance of learning to organizational effectiveness is no longer questioned. Research in the last decade has identified the central role of learning for enhancing individual development, team effectiveness, leadership, innovation, and competitive advantage. However, this acknowledgement of learning's importance has been accompanied by the lack of conceptual clarity when learning, change, innovation, and performance, all desirable states and covariants of each other, are necessarily studied together. Because learning and performance strongly influence each other, we are often left confused by which is the phenomenon of interest. This confusion is compounded when levels of analysis are considered. This paper examines learning and performance improvement, first as separate constructs, then, as complimentary elements in organization systems. Using a four-level systems model, changes in the relationship between learning and performance improvement are examined at different levels of the model.

Keywords: Organizational Learning, Performance Improvement, Systems Model

Several models exist to aid our understanding of systems and, in particular, the dynamics of organizations. Rashford and Coghlan (1994) frame strategies for change within a model with four levels—individual, team, interdepartmental, and organizational. Nadler, Gerstein, and Shaw (1992) provide a framework for organizational change with three levels—individual, unit/group, and system. Rummler and Brache (1995) argue that system-wide performance improvement requires attention to performance variables at three levels—individual, process, and organization. Each of these models specify an individual and an organizational level. However, inconsistency at the intermediate level(s) often results in confusion. What exists between the individual and organizational levels? Is this level best represented by *group*, *process*, or one or more other terms?

Holton (1999) proposed a four-level systems model that offers an important, new dimension not present in other models that appears to resolve this inconsistency and confusion. Holton's model, created as a framework for performance improvement research, is composed of four levels—individual, critical performance sub-system, process, and organization. This model makes an important distinction between a *process*—a structural component common to all systems, and what Holton calls a *critical performance sub-system*—a concept that can be used to designate a work group, department, center, division, or other structural unit specific to the system. This paper adopts Holton's model, with a minor modification described later in the paper, as the systems framework for examining the relationship between learning and performance improvement.

Individual level. The individual level is important because of the centrality of the job in studies of work and occupations where the individual is the job incumbent. Regardless of the model one uses, any human system must acknowledge the individual as its basic building block. In the following sections, learning and performance improvement are discussed as separate constructs. Then, the relationship between learning and performance improvement is examined to determine the conditions under which a closer relationship between these two phenomena might exist.

Learning at the individual level. Experiential learning occurs through reflection about concrete experience in which a pre-existing mental representation of a situation is reconciled with current experience (Kolb, 1984; Schon, 1983). The learner is able to construct new knowledge on the basis of existing knowledge. In novel situations for which no prior experience exists, the learner's burden to construct understanding increases. The learner must be resourceful in using materials, local conditions, and social circumstances to construct a conception of the new situation that is intelligible to the learner.

What is learned, both with and without prior experience, is intimately connected to the conditions in which it is learned. Even in familiar situations for which mental representations exist, learners will first try to deploy useful aspects of the task and their understanding of the context in order to limit the representational and computational load. This aspect of cognition was demonstrated by Scribner (1984) as "mental effort saving," in which dairy workers devised computational short cuts learned from practical experience. In developing a theory of

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situated learning, Brown, Collins, and Duguid, (1989) acknowledged that, when a situated approach does not facilitate learning, people may, step by step, fall back on abstract algorithms. However, the authors stated, "we still need to understand the initial impulse to try a situated approach. And if this approach indeed succeeds, reflecting on and justifying that success is a productive learning experience" (p. 11). If one accepts a view of learning consistent with the theory of situated cognition, then the following line of reasoning defines the learning experience.

- Context is crucial to learning. What is learned cannot be separated from the context in which it is learned.
- Context can include experience, but learning can proceed without direct experience.
- To compensate for lack of experience and as a supplement to the context of learning, the learner relies on heuristics and abstract algorithms as a way of forming a mental representation of what is learned.

When people lack experience with a situation or are introduced to a new concept, providing them with a model or description of the new situation is a useful catalyst for forming mental representations of what is learned. While inexperienced people may accept such a model, they will try to integrate it with new activities and perceptions, and any past experiences that may be related. The model will become part of the present context for learning, in which the learner's activity and perceptions precede mental representation.

Performance improvement at the individual level. Without engaging in a futile effort to pin down a concept that will likely always demand multiple interpretations, performance improvement is characterized in a particular way to serve as a conceptual anchor for the rest of this paper. In every organization the concrete determinants of performance are reflected in people, their ideas, and the material resources through which their ideas reach the marketplace. Performance improvement cannot be fully understood without specifying its determinants, accounting for the sophisticated processes through which performance is expressed, and making some judgment about whether or not performance has, in fact, improved. Performance improvement can only be manifest through outputs, and change in outputs can only be assessed through some form of measurement. Thus, performance is a systems concept that can be operationalized in any system as one sets out to demonstrate whether or not it has improved. The dynamic nature of performance improvement allows empirical inquiry into its determinants, dynamics, and consequences. Simply stated, performance improvement can be demonstrated through research.

Learning—performance improvement relationship. Learning can occur without performance improvement. Even in the workplace where behavior is expected to be goal-directed, most learning is informal and occurs through *noncanonical practices*—the improvisations and short cuts learned from actual experience (Brown and Duguid, 1991). People routinely share stories and work experiences with each other for a variety of reasons that include learning. An insight into one's work, whether it arises from formal or informal learning, may never be translated into a demonstrable improvement in performance. The value of workplace learning is not measured exclusively in the currency of performance outcomes.

Conversely, individual performance can be improved without learning. For example, take the situation of an employee who needs his/her job, and, for any number of reasons, is unlikely to leave it for another job. The supervisor requires this employee to spend more time on a particular task. Under the threat of punishment or dismissal by the supervisor, the employee does so. More work is accomplished and, subsequently, the employee's task-related performance improves. If "learning" has occurred at all, the employee has learned only to comply with the demands of the supervisor. This is not learning as it has been defined here.

Thus, learning and performance improvement are independent constructs; learning occurs without performance improvement and performance improvement occurs without learning. Moreover, there is no evidence that greater learning necessarily leads to better performance. However, features of the learning experience may predispose participants to better performance. Research that promises to strengthen this relationship examines the development of a climate for the transfer of learning to performance (Rouiller and Goldstein, 1993; Holton, Bates, Seyler, and Carvalho, 1997). The relationship between learning and performance improvement at the individual level is summarized in Table 1 (see Table 1, *Learning and Performance Improvement at Different System Levels).*

Function level. These are work groups, teams, departments, functional areas, centers, institutes, divisions, or other structural units designated by the organization system. Whenever two or more individuals come together for a common purpose, the structural unit created is a *function*. A function is different than a process (the next level of the model to be discussed) because processes integrate the contributions of several functions (thus, the term *cross-functional process*), and functions usually contribute to more than one process. While acknowledging the variety of configurations at the function level, the term "group" will be used to designate this level for consistency.

Learning at the function level. Learning at the function level is conceptualized as a phenomenon that is consistent with Simon's observation that "all learning takes place inside individual human heads; an organization learns in only two ways: (a) by the learning of its members, or (b) by ingesting new members who have knowledge

the organization didn't previously have" (1991, p. 125). Learning is strongly influenced by context and occurs in ways that are unique to the individual. When we move to the function level, learning still occurs through individuals. Two or more people constituting a group are expected to be familiar with a common body of knowledge and the resources that are available to achieve the group's purpose. Members must also observe basic rules of group interaction. Presumably because all members of the group increase their learning about these common elements, we refer to this type of learning as "team learning" or, in larger systems, as "organizational learning." However, this is really individual learning of content that is common to other members of the group. Group learning occurs as individuals learn more about this content and about each other.

If learning only occurs "inside individual human heads," what characteristics distinguish individual learning from learning at the functional level? Individuals enter the group experience bringing with them the responsibility for continuing their learning related to the job or role they hold. However, what learning responsibilities are incurred by group members beyond what is already expected of the individual?

Research has identified two distinctions between individual learning and learning at the function level. First, each member of the group must know how his/her role or task fits into the group's overall purpose. This may involve the development of a *transactive memory system*, in which members simply know the locations rather than the details of common events and rely on one another to contribute the missing expertise (Wegner, Erber, and Raymond, 1991). An alternative suggested by Hutchins' (1991) work on distributed cognition, is that a senior practitioner, who has previously held the roles of subordinates, coordinates members' contributions and assures the proper amount of overlapping expertise. A second distinguishing feature of learning at this level is, to the extent that some knowledge resides exclusively in the group, members must learn from each other (Hackman, 1990; Katzenbach and Smith, 1993). Weick and Roberts (1993) have described the heedful comprehension that occurs among group members as they learn from each other as the development of "collective mind."

Performance improvement at the function level. Improving work performance at the function level is not simply a matter of applying the factors used to improve job performance to more than one person. Groups face challenges to achieving performance goals not encountered by individuals. A model of performance is presented next that requires the systematic consideration of five determinants of group performance.

- *Performance goal.* Performance in most businesses is driven by the need to deliver value to customers in ways that are better, faster, and cheaper (Kaplan and Norton, 1992).
- *Consequences.* The alignment of consequences across organizational levels remains a challenge for managers (Kerr, 1973). Corporate credos espousing customer service are frequently contradicted by employees rewarded for customer volume, not customer satisfaction.
- *Communication and feedback.* The moment we move from the individual level to the group level, communication becomes essential for performance improvement. Communication is the vehicle through which group members determine how their role or task fits into the group's overall purpose, and meets the needs of the larger system (Schein, 1990). Communication includes feedback on progress toward goal attainment, a crucial component of performance improvement. Research indicates that performance improvement may be impossible without it (Ilgen, Fisher and Taylor, 1979; Locke and Latham, 1990).
- *Materials and equipment.* Rarely can performance be improved without the use of materials and equipment (Deterline and Rosenberg, 1992). Information technology has recently had such a dominant role in improving the performance of organizations that we tend to take this technology for granted. Yet, we can't expect better products or more satisfied customers if employees lack the tools they need to accomplish these goals (Rummler and Brache, 1995).
- *Learning.* Learning is a crucial determinant of performance improvement. Individuals must know how their roles and tasks contribute to the group's overall purpose. To the extent that some knowledge resides exclusively in the group, members must also learn from each other.

Beyond acknowledging that performance cannot be improved in the absence of one or more of these determinants, no judgement can be made about the relative importance of the determinants to performance improvement. The centrality of a particular determinant is a function of the type of work performance to be improved. Performance in one situation may be enhanced primarily through information technology (materials and equipment). Performance in another situation may be improved as sales personnel gain insights into optimizing the match between customer needs and product capabilities (learning). Next, we examine the relationship of one factor, learning, to the other determinants of performance improvement to gain more insight into the relationship of learning and performance improvement.

Learning—performance improvement relationship. While learning is crucial to performance improvement, by itself, learning is not sufficient to improve performance. The following example, in which an organization introduces new computer-based technology to improve its most profitable product, illustrates this relationship between learning and performance improvement. The goal of the organization is to deliver value to the customers in ways that are better, faster, and cheaper. A small work group composed of a customer service representative, a product designer, and a production supervisor have come together to develop ways to integrate the new technology into their existing operations.

An immediate obstacle to this group's performance is the current system of rewards. For example, the customer service representative is compensated based on the number of customer orders processed, yet there is little incentive for concern about overall work quality. Similarly, the production supervisor's compensation reflects the number of units produced per work shift. The quality of the units produced is considered to be the responsibility of the design department from which production receives its work. These consequences are too easily interpreted as meaning, "quality is someone else's job, not mine!" Properly aligned *consequences* would include compensation for the customer service representative based on the percentage of repeat customers (reflecting the quality of prior work) and compensation for the production supervisor that reflects production quality, not just volume.

Feedback is especially important to this group because their goal requires true innovation—the new technology has never been used with existing operations. Because there is no precedent for what they are doing, the absence of feedback could result in poor progress or costly mistakes. *Communication* within the group is especially important because of the diversity of the expertise of each group member. Frequent communication partially compensates for their lack of overlapping skills. New technology *(materials and equipment),* which allows greater production efficiency without sacrificing quality, is the catalyst of this performance improvement opportunity.

Learning occurs within the group as each individual learns more about the new technology and about how it is integrated in a cross-functional way. If the group's experience is characterized by continuous learning, then it is quite likely that the project will be successful. Ultimately, customers would receive a better product at a lower price in less time. The performance goals will be achieved.

In this example, performance is improved through the contribution of all five determinants, including learning. However, learning alone is not sufficient to improve performance. Learning alone cannot reduce production cycle time caused by slow, out-dated equipment. Most employees have learned about the importance of quality. Yet, they routinely behave in ways that maximize their rewards, often regardless of customer perceptions. Without a group performance goal that is also important to the rest of the organization, learning for other purposes (for examples, personal or group development) is too easily dismissed as peripheral.

Poor performance resulting in delays, low quality, and additional costs can be measured in almost every work environment. In these situations, initial measures can be compared with subsequent measures to determine if performance has improved. If so, as in the case described here, it is likely that learning has made a significant contribution to performance improvement. However, rarely does learning play an exclusive role; performance improvement at all levels of the system has multiple determinants, including learning. The relationship between learning and performance improvement at the function level is summarized in Table 1 (see Table 1, *Learning and Performance Improvement at Different System Levels).*

Process level. A process is a sequence of interrelated tasks, activities, and functions that produce a given output. A process typically integrates the contributions of several functions. Because a process spans significant portions of the system, it is likely to connect with the external environment.

Learning at the process level. At this level, two or more groups are needed to pool their expertise for purposes that cannot be achieved by a single group. However, learning at this level takes on an additional dimension—the integration of the expertise of several functional groups working together. For example, in a project involving three groups, group A needs to be familiar with the expertise and contributions expected of group B, which, in turn, needs to communicate with group C. Each group needs to know something about what the other groups are doing. Yet, this overlapping knowledge presents an additional challenge—the trade-off between diversity and commonality of knowledge across groups. How much overlapping knowledge should each group possess?

The risks assumed by cross-functional groups that have no overlapping knowledge are obvious—errors occur. Each group focuses on its own agenda while not developing the "peripheral vision" needed for the awareness of what other groups are doing. Numerous other accidents have resulted from the failure of groups to share their expertise and expectations (Perrow, 1984). On the other hand, too much overlap in the knowledge shared by groups creates redundancy that is costly. Too much commonality of knowledge may also hinder the innovation that arises from diversity of ideas. Common backgrounds can lead to low levels of attention and the absence of the diverse stimuli (Robinson and Stern, 1997) and motivation (Amabile, 1997) for innovation. Successful cross-functional groups develop methods to determine the proper balance between the diversity and commonality of knowledge.

Performance improvement at the process level. At the process level the success achieved by a particular group is no longer enough for performance improvement. Performance improvement is now dependent on the collective contributions of each group supporting the process. The key determinants of performance (performance goals, consequences, communication and feedback, materials and equipment, and learning) are still at work within each group. However, at the process level an additional requirement exists for performance improvement—that each group contributes its expertise to a broader outcome that cannot be achieved by any group alone.

The Manhattan Project, the interdisciplinary effort that produced the first atomic bomb, illustrates the necessity of bringing together the achievements of each group for the overall success of the project. Although physicists at the Los Alamos laboratory were rightfully credited with developing the nuclear fission technology for the atomic bomb, the performance of other groups was also vital to the success of the Manhattan Project. The group responsible for uranium and plutonium processing had to develop and deliver this material quickly to keep the project on schedule. In addition, political and military leaders had to develop a strategy for using the bomb that was politically acceptable. Each group had to achieve success in their own area of the project (designing the atomic device, providing enriched uranium, and developing a targeting strategy). While each of these accomplishments was an innovation in its own right, these outcomes had to be integrated for the overall success of the project. Success within each function was not sufficient; performance improvement at the process level requires the integration of performance enhancements across functional units.

Learning—performance improvement relationship. How much overlapping knowledge should groups possess? The challenge of distributing overlapping knowledge among functional groups can be reduced by reflecting on the learning—performance improvement relationship. Groups that come together for the first time, particularly for innovative purposes, likely have little overlapping knowledge. As they begin to work together toward a common purpose, each group gradually learns more about the expertise of the other groups. This occurs as they trade interim products of their knowledge, such as draft reports, blueprints, proposals, and other work that reflects the specialized expertise of each group. As each round of refinements is shared among the groups, their overlapping knowledge increases as it approaches the point of complete overlap—the state in which each group possesses all the knowledge of the other groups. Yet, at what point is this gradual increase in overlapping knowledge optimized? In most business contexts, the cost of increasing knowledge among groups to the point of complete overlap is not justified.

Regardless of cost, overlapping knowledge is neither necessary nor desirable in most situations. Instead, the learning of each group about domains beyond its specialty increases to the point at which a collective product that meets established performance criteria is produced. At this point, all the learning necessary for contributing to the project has taken place. While additional learning may be beneficial to a group or individual members, the ultimate recipient of the product, the customer, will likely not see the value of this additional learning. In fact, when the purpose of cross-functional collaboration is new product development, the time needed for additional learning beyond this point may delay goal achievement, such as the release of a new product in the marketplace. Performance criteria, then, can determine the optimum degree of overlap of cross-functional learning. The relationship between learning and performance improvement at the process level is summarized in Table 1 (see Table 1, *Learning and Performance Improvement at Different System Levels).*

Mission level. The top level of the systems model addresses the relationship of the system to its external environment. In proposing the four-level systems model, Holton (1999) states that "every purposefully organized system operates with a mission, either explicitly or implicitly, and the role of the mission is to reflect its relationship with its external environment" (p. 25). Business organizations use mission statements to capture the core relationship they have with customers, their industry, or society. A government organization may define its mission in terms of providing certain benefits to the community. Other systems that are organized around a common purpose include trade associations, professional groups, economic coalitions organized at the local, regional, national and international levels, non-profit groups organized for environmental and humanitarian purposes, and other groups. As these examples demonstrate, the concept of mission can encompass one or more organizations, and thus, is a more meaningful and universal term than "organization" for this level of the systems model.

Learning at the mission level. Learning at the mission level includes a strategic dimension not usually considered at lower levels. For example, take the mission common to all hospitals—providing high quality health care to those who need it. There are different kinds of hospitals, including large academic medical centers, smaller community hospitals, and hospitals that provide rehabilitation, mental health and other specialty services. Yet, all of these institutions are organized around the purpose of providing high quality health care. Health care cost containment—a challenge issued by insurance companies, government regulators, and employers—currently poses a threat to the viability of most hospitals. Like other organizations, each hospital operates according to its own strategic plan for meeting the needs of its constituents in cost-effective ways. A large medical center follows a

different health care delivery strategy than a community hospital, even though the two institutions may be located in the same region. Yet, the mission level adds a dimension that transcends how two or more hospitals operate in a given market. All hospitals must respond to a broader concern for cost containment. This concern shapes the strategy of each hospital, regardless of its size or services. At the mission level, each hospital must learn not only how to develop its own strategy for cost containment, but one that is consistent with other institutions and responsive to the concerns of insurers, regulators, and employers. In this sense, organizations across the hospital industry must learn together how to address this concern in ways that are consistent with their mission.

Performance improvement at the mission level. The same strategic perspective applies to performance improvement at the mission level. Efforts to improve performance must be integrated and span the boundaries of the system so that they can be recognized by customers or other external stakeholders. An example from the airline industry illustrates performance improvement at the mission level.

The perennial concern for air traffic safety underlies the industry-wide practice of sharing data on weather patterns, airports, aircraft, and other equipment and facilities. Industry level associations like the Air Traffic Association, Airline Pilots Association, and the Federal Aviation Administration regularly share information with all air carriers for the purpose of improving safety. This mission-level effort to improve performance transcends the strategic interests of a particular airline. Each airline has learned that only through industry-wide efforts to improve safety performance can claims be made that air travel is safer than highway travel in terms of accidents and deaths per passenger mile traveled. Thus, regardless of whether the system is defined as an organization or an industry, performance improvement at the mission-level must span the system to reach the external environment.

Learning—performance improvement relationship. A paradox is apparent in the learning–performance improvement relationship. Measurement is necessary to demonstrate performance improvement. As we have seen at each level of the system, learning is also necessary for performance improvement. Yet, the most meaningful learning often is not amenable to measurement (Kolb, 1984; Brown, Collins, and Duguid, 1989). It is even more difficult to measure the contribution of learning to performance improvement, especially at the mission level where, at a minimum, the performance of several processes must be integrated for systemic results. Thus, performance improvement requires both measurement and learning, yet the contribution of learning to performance improvement is rarely measurable.

This challenge is further complicated by the dynamic nature of performance measurement. Meyer and Gupta (1994) observed that the number of performance measures continues to grow. As performance measures change, often dramatically, they tend to be less correlated with one another. As organizations improve their capabilities for reaching performance goals, performance measures tend to lose their ability to discriminate good from bad performance. This triggers the creation of new performance measures different from and, therefore, poorly correlated with existing measures. Thus, a state of multiple, uncorrelated, and changing performance measures exists. In this environment, organizations must support the key determinants of performance, including learning, and attempt to achieve performance goals that appear to be moving targets.

Several studies have attempted to clarify the relationship between learning and performance at the mission level. Learning, although not explicitly measured in these studies, was at the core of the human resource practices examined by this research. Authors used measures of developmental practices that included formal job training and employee development (Kalleberg and Moody, 1994), team-based work systems and training for new and experienced employees (MacDuffie, 1995), transformational relationships between managers and employees (Cutcher-Gershenfeld, 1991), and quality improvement teams, employee training, and the linkage of performance with rewards (Huselid, 1995). In each study, learning, whether individual or collective, was not explicitly measured. Yet, learning was central to the achievement of mission-level performance goals. Learning was the basis for several of the human resource practices supporting Huselid's (1995) assertion "that human resource management practices can affect individual employee performance through their influence over employees' skills and motivation and through organizational structures that allow employees to improve how their jobs are performed" (p. 638). MacDuffie (1995) found support for the hypothesis that, "*bundles* of interrelated and internally consistent HR practices, rather than individual practices, are the appropriate unit of analysis for studying the link to performance because they create the multiple, mutually reinforcing conditions that support employee motivation and skill acquisition" [italics in original] (p. 198).

Thus, learning was embedded in larger systems of human resource practices that included work skills development, performance-based compensation, participatory decision making, team-based work design, and other human resource innovations. While the centrality of learning to performance improvement in each study was undeniable, learning's contribution was difficult, if not impossible, to isolate. The relationship between learning and performance improvement at the mission level is summarized in Table 1.

Several conclusions can be drawn from this analysis of learning and performance improvement.

1. Learning and performance improvement are independent concepts. Learning can occur without performance improvement; performance improvement can occur without learning.
2. The scope of learning increases as we ascend the model from the individual level to the mission level. The responsibilities for learning are cumulative—those at lower levels are carried to each higher level of the model. The cumulative nature of learning also enhances its role in performance improvement. That is, the role of learning in performance improvement also appears more prominent at higher levels of the model.
3. Performance criteria can help determine the scope and depth of learning needed to achieve system goals. This is especially important when the value of learning must be balanced against its costs.
4. While measurement is necessary to demonstrate that performance has improved, measurement is not necessary to demonstrate the value of learning. This presents a paradox—performance improvement requires both measurement and learning; yet, rarely is learning's contribution to performance improvement measurable.

Implications for Future Research

This study raises several issues that warrant further research. An unresolved issue is the role of experience in learning and performance improvement. The influence of experience on the learning process has been extensively studied (Kolb, 1984; Lave and Wenger, 1991; Schon, 1983). The role that experience plays in the development of expertise has also been demonstrated by Bereiter and Scardamalia (1993), who identified characteristics that distinguish the expert from the experienced non-expert. As studies of innovation seem to show, experience is also not a prerequisite for entrepreneurial performance (Amabile, 1997; Robinson and Stern, 1997). If so, how does the role of experience change as we move from learning to performance improvement? If both learning and performance improvement can proceed in the absence of experience, why has experience commanded so much attention from learning theorists?

Learning was described as an experiential process that is strongly influenced by context, and that occurs in ways that are unique to the individual. Performance improvement was described as a systemic phenomenon that is manifested through a change in outputs. A situation was described in which performance was improved without learning in which an employee, under pressure from a supervisor, improved performance by spending more time on a particular task. However, contrary to the point illustrated by this example, it is likely that performance cannot be improved without some form of learning. Research, drawing on richer descriptions of how performance improvement and learning occur, is needed to examine whether performance can ever be improved without learning.

The role of measurement in relating learning to performance improvement also warrants further research. This paper concludes that, while measurement is necessary to demonstrate performance improvement, the value of learning is not dependent on what can be measured. Previous studies have identified the importance of learning to the achievement of mission-level performance outcomes, yet the contribution of learning has been difficult, if not impossible, to isolate. Further research is needed to clarify when and how measurement should be used to relate learning to performance improvement.

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	Learning	Performance Improvement	Relationship of Learning to Performance Improvement
Mission	• Learning transcends organizational boundaries. • Learning must balance needs that are both internal and external to the system.	• Performance improvement must be recognized by the external environment. • Mission-level performance measures must be aligned with measures at lower levels of the system.	• The paradox—Performance improvement requires both measurement and learning. Yet, rarely is learning's contribution to performance improvement measurable.
Process	• Learning addresses the integration of expertise across functional units. • The degree of learning overlap must be determined.	• Process-level performance improvement requires success within each functional unit and integration across functional units.	• Performance criteria can determine the optimum degree of overlap of cross-functional learning.
Function	• Groups learn as their members learn. • Members must learn role/task integration. • Members must learn to learn from each other.	Performance improvement is determined by five factors: • Performance goal(s) • Consequences • Communication and feedback • Materials and equipment • Learning	• The five determinants must be addressed individually and collectively for performance improvement. • Learning is necessary, though not sufficient, for performance improvement.
Individual	• Experiential learning • Importance of context • Heuristics compensate for lack of experience.	• Performance improvement is a systems concept. • Performance improvement cannot be demonstrated without outputs and measurement.	• Learning can occur without performance improvement. • Performance improvement can occur without learning. • Attention to learning transfer can strengthen the learning—performance improvement relationship.

Table 1. Learning and Performance Improvement at Different System Levels

Historical Antecedents Shaping The Terms Of Performance And Learning And Their Relationship In Human Resource Development: An Exploratory Study

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This study explores the gap that exists in the Human Resources Development (HRD) Field regarding whether its key ingredient is either "performance" or "learning." It investigates through ancient and modern lexical, dictionary and common use sources how the meanings of these two and other related terms evolved historically and how their meanings are interpreted. The results indicate that the two distinct terms together and their relationship within the HRD context are key to HRD.

Keywords: Performance, Learning, Human Resource Development Key

Purpose of the Study

The purpose of this study is to address a gap that exists in the Human Resources Development (HRD) Field regarding its perceived key ingredient as being either performance or learning (Watkins & Marsick, 1995; Swanson, 1995). Focus will be placed on understanding how the meanings of these and some other key HRD terms have evolved historically, how their meanings are interpreted, and how they relate to each other. This study suggests that probing into some of the historical background of the terms "learning" and "performance," as well as some other related terms,which have similar meanings to these two, and their mutual relationships, could help to deepen understanding of the HRD Field as well as clarify the discussion and use of these terms in the HRD Literature.

Problem Statement and Theoretical Framework

Performance has become a "byword" in the lexicon of HRD. Performance has been hailed as the key ingredient to HRD (Swanson, 1995). Improved performance has also been hailed as being the purpose of HRD (Lynham & Swanson, 1997; Swanson & Arnold, 1997), and the outcome of HRD (Knowles, Holton & Swanson, 1998). The design of performance has been acclaimed as the means for HRD making copporate organizaational success happen (Taylor & Felton, 1993). Performance has also been included in various current HRD definitions (Swanson, 1995; Knowles, Holton & Swanson, 1998). Knowles, Holton & Swanson, (1998) define it as the organizational system outputs that have value to the customer in the form of productivity attributable to the orgaqnization, work process, and/or individual contributor level. It is the means to measure organizational goals which include rate of return, cycle time, and quality of output. It is further defined structurally (Swanson, 1995; Arnold & Swanson, 1996) as having: variables such as mission/goal, system design, capacity, motivation, and expertise; and levels such as organization, process, and individual. Ruona & Lyford-Nojuma (1997) support this structural definition of performance with references from thirty different research studies. Nevertheless, Lynham & Swanson (1997) do not indicate how performance is developed, nor how one becomes prepared for performance in HRD.

Watkins & Marsick (1995), on the other hand, make a strong argument for learning as the key ingredient in HRD. Although they do not mention the word "performance," they exspress a vision for HRD and its definition as the field of study and practice which is responsible for the fostering of a long term, work-related capacity at the individual, group and organizational levels. As such, it includes -- but is not limited to -- training, career development, and organizational development. Hatcher, Hinton and Swartz (1995) emphasize the importance of continuous learning in preparing people to go into and remain in the HRD Field. In making the case for learning being the key ingredient of HRD, Watkins & Marsick (1995) do not emphasize just individual learning. They propose that a unique niche for HRD that is distinctive is the concept of the learning organization -- one that brings together two major components: learning, and the workplace context in which learning occurs. Delors (1997) argues that one of the pillars of the heartbeat of the twenty-first century society is learning to do/perform a job of work. Belanger (1997) proposes that learning take place continuously not only on the individual level, but also on the istitutional/organizational level and the systemic level. Knowles (1989) expressed how he would like to be helped in his learning by a human resource developer in the twenty-first century. This certainly implies that lifelong

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learning is and will continue to be a central component of life and work. This has lead Watkins & Marsick (1995) to propose the learning organization as central to the HRD function. There are strong arguments on both sides of this discussion for the key ingredient in HRD to be performance as well as learning.

Research Questions

In order to understand the discussion more fully, the nature of the separation between learning and performance in HRD parlance, and to explore the possibility of closing the gap between the two terms (and other related terms), the following questions may be appropriate to further guide this study: how have the meanings of key HRD terms evolved historically? and, how are their meanings interpreted?

Methodology

An investigation was conducted into how the words "performance" and "learning" evolved historically in the HRD literature, especially in the Academy of Human Resource Development (AHRD) Research Conference Proceedings and related literature in the HRD Field. In addition, an inquiry was conducted into the words "performance," "learning," (and any other related terms such as doing, teach, guiding, instructing, leading, training, learning organization, hearkening, wisdom, and modeling), as defined by English language dictionaries (Webster, 1828; Russell et. al., 1939) , and the historic standard lexicons of the ancient Greek and Hebrew languages (Thayer, 1979, 1981; Brown et. al., 1979; Zodhiates, 1984, 1990). One of the reasons these two ancient languages were chosen is that Hebrew has remained virtually unchanged for more than twenty centuries, and the Greek (Koine) referred to is a translation from the ancient Hebrew. Another reason is that the author has language background in both Hebrew and Greek, and has interest in this kind of study. After the data obtained from the dictionaries and lexicons were analyzed, the data are presented and outlined in accordance with the definitions of the various words and their relationships (or lack of it) with the "performance" and "learning" terms and definitions within the Field of HRD.

Historical Background

Pace et. al. (1991) trace the history of HRD efforts through four eras: employee skillfulness--to 1800; employee efficiency--1800/1920; employee satisfaction--1920/1945; and, employee enhancemant--1945/present. Nadler & Nadler (1990) suggest that the history of HRD (under a variety of names) dates back to the dawn of recorded history when the first caveman took his son aside and taught him how to tie a sharpened piece of obsidian to a piece of straight wood to make a spear. However, it was not until the 1940s, that he thinks there was sufficient concern to produce written material directly related to the HRD Field. However, Houle (1992) discovered evidence that somewhat earlier, Peffer (1932) concluded that programs of the HRD sort in industry and commerce were the largest component of adult education at that time, and that Rowden (1937) assessed the educational work in trade associations for their own staffs and those of their member agencies. In addition, Henschke (1991) observed that prior to the 1940s, Lindeman (1938) laid the initial foundation for HRD professional competencey development. Furthermore, Nadler & Nadler (1990) provide a sketchy history of the emergence and development of HRD. They suggest that among the predecessor terms to HRD were training, vocational education, apprenticeship, sensitivity training, applied behavioral science, and organization development. The HRD term was first introduced to the American Society for Training and Development (ASTD) in Miami in 1969.

Since 1970, a definition of HRD has been in print. There are four presented here which find some acceptance in the Field. Nadler & Nadler (1989) defined it this way, "HRD is organized learning experience provided by employers within a specified period of time to bring about the possibility of performance improvrement and/or personal growth." Nadler & Nadler (1990) kept their definition almost unchnaged, "HRD is defined as organized learning experiences in a definite time period to increase the possibility of improving job performance growth." Pace, et. al., (1991), define HRD as "the integration of individual development, career development, and organization development roles to achieve maximum productivity, quality, opportunity, and fulfillment for organization members as they work to accomplish the goals of the organization." Marquardt (1993) presents the definition given by the ASTD, "HRD is the integreted use of training and development (planned learning) organization development, and career development to improve individual, group, and organizational effectiveness." All of these definitions have "learning" as a central component. Two of them also have "performance" as a central component. The third one focuses on "accomplishing the organization's goals," which could imply the necessity of both performance or learning, without mentioning either. The fourth one has "planned learning" but does not have

"performance," although it includes effectiveness, which could and most likely does mean the same thing as "performance" in this context.

As time moved on, the HRD Field began to grow and develop. By 1942, the many active local state organizations involved in job related skill development, came together to form the American Society of Ttraining Directors (ASTD -- in its first form) (Nadler & Nadler, 1990). Training and/or learning was the focus of their efforts, and these terms were used interchangeably, with training being the term most often used. Some years later the ASTD changed its name to the American Society for Training and Development, but kept the same acronym. Beginning in 1938 and continuing through 1989, twenty-seven HRD Competency studies were conducted to continue clarifying the competencies necessary for professionals to learn in order to perform the HRD function (Henschke, 1991). ASTD was centrally involved in conducting five of these studies in 1959, 1974, 1978, 1983, and 1989. There was an active University HRD Professors' group, which met annualy in conjunction with the ASTD conference, concerned with the learning aspects of developing competencies. They became involved in the development of the 1989 ASTD competency study. Subsequent to that study being completed, those professors focused their 1990 conference in Orlando, Florida, on developing *The Academic Guide* for using the 1989 competency study in university academic programs. This guide was published by ASTD, and the definition of competency included in it is: Competency is a cluster of knowledges, understandings, skills, attitudes, values, and interests that are necessary for the performance of a function -- in this case it would be the human resource developer function (Henschke,. 1991). Thus, both "learning" and "performance" were included in the definition. This group of professors was the nucleus of the group that in 1993 launched The Academy of Human Resource Development (AHRD).

Taylor & Felton (1993) in their HRD book entitled *Performance by Design* emphasize the centrality of learning in designing performance within sociotechnical systems, underscoring the fact that performance is a dynamic process and not a static one. Thus it may be conjectured that whether one is just entering the HRD Field or is a veteran in it, learning is always a central component (while not the only one) of improving our performance in the work/corporate/organizational context; and one is continuously progressing, improving, and seeking to arrive, but never quite arriving at the finish line, even of performance. Almost without exception, it could be done better.

The gap and separation between performance and learning seems to come into the most pronounced visibility in the Field at the 1995 AHRD Conference in St. Louis, Missouri. At the opening town meeting, Watkins stated the case for learning being the key to HRD, and Swanson stated the case for performance being the key to HRD. One the one hand, the Watkins & Marsick (1995) paper presses for a focus on not only individual learning, but also a focus on a learning organization with the essential elements of: increasing the overall learning threshold; assessing and enhnacing current capacity for learning; creating an ongoing adaptive capacity by embedding systematic linkages between needs, work and rewards; and, building autonomy and empowerment, "space of free movement." On the other hand, the Swanson (1995) paper vies for a focus almost exclusively on performance, with his perspective on learning being only one of the components leading to expertise; expertise being only one of the components of worthy performance on the individual, process, and organizational levels.

At the AHRD Conferences subsequent to that debate by Watkins and Swanson, additional viewpoints have been expressed. Various researchers provide evidence of training (which some may possibly view this term as synonomous with learning -- though others may doubt it) as contributory toward: solving organizational performance problems (Palmer & Crepas, 1998); improving performance in a car rental company (Sleezer, Hixon, Green & Mudgett, 1997), high performnace within an organizational systyem (Bassi & Van Buren, 1997). Training is also mentioned as one of twenty-one ingredients of effective team performance (Struemer, Hendreks & Vermeulen, 1998). Others also assert that there is a close link between learning and performance in HRD. Leimbach & Baldwin (1997) claimed that learning research definitely is one ingredient in performance research within the HRD value chain, but make a weak case by suggesting that very little research has been conducted on learning. Swanson & Arnold (1997) seek to emphasize the importance of adult learning and its relationship to performance, but weaken their argument by diagraming Adult Education (AE) and HRD as being discrete entities within an organizational and environmental context, with AE being in the larger environment but almost totally removed from the organization, and HRD being totally in the organization which is set within the larger environment. Van Zoligen & Nifhof (1998) strongly support the inseparable connection between the process of lifelong learning and performance, expressing the view that the key qualifications for performance are acquired through lifelong learning. Pace, Smith & Mills (1991) use the terms training, development and learning interchangeably to describe a crucial element and tool needed in HRD for integrating individual development (with workers performance of current jobs more effectively), career development (with workers assuming a variety of different jobs in the organizaation), and organization development (with workers moving into jobs yet to be identified and defined), to achieve maximum productivity, quality, opportunity, and fulfillment for organization members as they work to accomplish the goals of the organization.

Holton (1998), in a recent attempt to link learning and performance in HRD, says that performance is a multidimensional and poorly defined construct. Adapting Swanson's (1995) three levels of performance -- organization, process, individual -- Holton (1998) identifies four domains of performance as mission, process, critical performance subsystems, and individual. He makes an attempt at a strong case for adult learning, setting the stage for a closer alliance between performance and learning. He moves forward to craft a definition and connection between the two for the future. With today's changing world of technological innovation, volatile national economies, roller coaster stock markets, the daily birth and death of numerous business organizations, and corporate "right-sizings," lifelong learning appears to be a crucial necessity. More importantly, the need for lifelong learning is especially true for everyone, everywhere if human resources are to perform effectively, now and in the future.

Sources and Roots of Terms

For some of the words which are included for analysis, there are numerous Hebrew and/or Greek words which are equivalent to the English words. For instance, performance has eight equivalent Hebrew words and there are seven in Greek. Learning has seven Hebrew and five Greek equivalent words. Other words would have similar numbers. Hence, to keep this paper from expanding beyond the eight page scope allowed here, only the most appropriate Hebrew and Greek words will be selected for inclusion. Now, to the selected words from Hebrew, Koine Greek, and Webster's original English Dictionary, which include: performance, do, learning, teach, instruct, guide, lead, train, learning organization, hearken wisdom and model. The definition of the term "learning organization" will only be garnered from the HRD literature since it has no antecedents as a term combined of two other words.

Performance

The Hebrew word is "asah." This root means to do a work, labor, toil, make, create, construct, build, accomplish, earn, procure, prepare, sacrifice. It has the connotation of ethical obligation. I deals with refinements fashioning the object created. Another Hebrew word is "pala." This means remarkable, surpassing, extraordinary, distinguished, and singular in causing wonderful things to happen. A final Hebrew word is "shalam." The principal meaning is completion, fulfillment, wholeness in which relationships are restored. (Brown, et. al., 1979; Zodhiates, 1984, 1990). The Greek word is "poieo." The word means quality, to make, to endow a person with a certain quality. It is fashioning and bringing forth something which, when produced has an independent existence of its own. Another Greek word is "teleo." It means to bring anything to perfection or to its destined goal, to carry it through. (Thayer, 1979, 1981; Zodhiates, 1984, 1990). The English word "performance" means execution, completion, fulfillment, or carrying out of any work or undertaking (Webster, 1828; Russell, et. al., 1939).

Do

The Hebrew word is "hayah." It means to come to pass, to be done, to turn out, to happen, to be finished in a dynamic sense, not a static one (Brown, et. al., 1979; Zodhiates, 1984, 1990). The Greek word is "energeo." It means to be active and energetic, to effect, prove oneself strong (Thayer, 1979, 1981; Zodhiates, 1984, 1990). The English word "do" means to perform, to execute, to carry into effect, to exert labor or power upon, to bring anything to the state desired or to completion, to bring to pass (Webster, 1828; Russell, et. al., 1939).

Learning

The Hebrew word is "lamadh." It has the idea of learning, studying, becoming accustomed to, exercised in, instructing, training, educating, practicing, being taught and trained. This one Hebrew word had wrapped up in it what it took two Greek words to express: "manthang," to learn, and "didasko," to teach. Another Hebrew word is "alaph," which means being accustomed to something or having close association with an object; hence, the idea of learning from association. A final Hebrew word is "leqach," which has the meaning of persuasiveness in a good sense (Zodhiates, 1984, 1990; Brown, et. al., 1979). The Greek word is "manthano," meaning to endeavor, desire, seek to learn, experience, or bring to experience. Another Greek word is "gramma," meaning learning and knowledge gained from books and writings (Thayer, 1979, 1981; Zodhiates, 1984, 1990). The English word "learning," means to acquire knowledge of something before unknown; in popular use, learn has both senses to teach and to learn (Webster, 1828); to acquire information concerning, by instruction, by study, by observation, by experience, or in any other way; formerly, it meant to teach--but this use is now obselete among careful writers and speakers (Russell, et. al., 1939. In one HRD definition, "learning is a shift of mind, and is what goes on inside learners as they undertake to gain or acquire new knowledge, understanding, skill, attitudes, values, and interests."

The "what goes on" could be described as: perceiving--sensing and feeling concrete reality, thinking or reasoning abstractly; and internalizing or processing-- making it a part of oneself by actively jumping in and trying it, or reflecting on and watching what's happening, so the HRD professional, whom it would be safe to assume is an adult learner, would have going on inside of her/him the perceiving and internalizing of new knowledges, understandings, skills, attitudes, values, and interests (Henschke, 1995).

Teach

The Hebrew word is "yarah." It has the idea of shooting arrows, pouring rain, casting, laying a foundation, erecting, establishing, irrigating and giving water, putting out words, the connotation of aiming for something (Brown, et. al., 1979; Zodhiates, 1984, 1990). The Greek word is "didasko," having inherent in it the calculation of the increase of understanding of the pupil (Gthayer, 1979, 1981; Zodhiates, 1984, 1990). The English word "teach," means to communicate to another the knowledge of that of which he was before ignorant (Webster, 1828; Russell, et. al., 1939).

Instruct

The Hebrew word is "sakhal," with the idea of showing oneself attentive to, understand, consider, circumspect, desirable to look upon, cause to make wise, to have intellectual comprehension, insight, expertise and skill, knowing the reason for something (Brown, et. al., 1979; Zodhiates, 1984, 1990). The Greek word "matheteuo," means not only to learn but to become attached to ones teacher and to become his follower (a disciple) in teaching and conduct (Thayer, 1979, 1981; Zodhiates, 1984, 1990). The English word "instruct," is to inform the mind, to impart knowledge to one who is destitute of it (Webster, 1828; Russell, et. al., 1939).

Guide

The Hebrew word is "yaats." It has the idea of counseling together, consulting with one another, to devise, decide, plan, propose, and advise, to exchange counsel as a king with his advisors (Brown, et. al., 1979; Zodhiates, 1984, 1990). The Greek word "kateuthuno," means to make straight, direct, remove the hindrances to coming to one (Thayer, 1979, 1981; Zodhiates, 1984, 1990). The English word "guide," means one who leads another in his way or course, who goes before or accompanies to point out the way (Webster, 1828; Russell, et. al., 1939).

Lead

The Hebrew word is "nachah." It has the notion of guiding, going in the direction of, turning eyes toward, bringing, just as the pillars of cloud and fire indicated the way to go for the Children of Israel, treating kindly, moving on a path to benefit (Brown, et. al., 1979; Zodhiates, 1984, 1990). The Greek word is "ago," meaning to bring, carry, to bring gently and without violence (Thayer, 1979, 1981; Zodhiates, 1984, 1990). The english word "lead," often includes the sense of drawing as well as directing (Webster, 1828; Russell, et. al., 1939).

Train

The Hebrew word is "chanakh," meaning to initiate, to dedicate, consecrate, to inaugurate (Brown, et. al., 1979; Zodhiates, 1984, 1990). There is no Koine Greek word for "train." The English word "train, is to draw along from act to act by persuasion or promise, with discipline, exercise, and formed by practice (Webster, 1828; Russell, et. al., 1939).

Learning Organization

The HRD literature defines this as "one that learns continuously and transforms itself. This means learning: takes place in individuals, teams, organizations and society; is a continuous, strategically used process--integrated with, and running parallel to, work; results in changes in knowledge, beliefs, and behaviors; enhances organizational capacity for innovation and growth; and has embedded systems to capture and share the learning" (Henschke, 1995).

Hearken

The Hebrew word is "shama," meaning to hear with undivided listening attention and obedience (Brown, et. al., 1979; Zodhiates, 1984, 1990). The Greek word is "adouo," meaning to hear with the ear of the mind effectually, or so as to perform or grant what is spoken (Theyer, 1979, 1981; Zodhiates, 1984, 1990). The English word "hearken," is to attend to what is uttered, as to words of advise or admonition (Webster, 1828; Russell, et. al., 1939).

Wisdom

The Hebrew word is "chokhmah." It is intelligence, experience, insight, prudence and judgment in a positive sense (Brown, et. al., 1979). The Greek word is "sophia." It means one knows how to regulate ones relationship to goodness and circumstances (Thayer, 1979, 1981; Zodhiates, 1984, 1990). The English word "wisdom," means the right use or exercise of knowledge; the choice of laudable ends, and of the best means to accomplish them (Webster, 1828; Russell, et. al., 1939).

Example/Way/Model

The Hebrew word is "derekh." It means a going, way, journey, walk, road, manner, path, way of life. It refers to the actions and behavior of humans. The word is used to denote some wonderful things which leave no trace that is externally visible to the physical eye, but are as they are because of their nature. The wonderful things are: the way of an eagle in the air, the way of a serpent upon a rock, the way of a ship in the heart of the sea, and the way of a man with a maid. Looking to the heavens, one cannot say that an eagle has passed there. Looking to the rock, one cannot say that a serpent has wound its way around it. Looking to the high sea, one cannot say that a ship has been steered through it. Looking to the maid, one cannot say that a man has had sexual intercourse with her (Brown, et. al., 1979; Zodhiates, 1984, 1990). The Greek word "tupos," carries with it the idea of a constitutent element of a model of some current reality, or that which is yet to be developed, a pattern to be imitated or copied (Thayer, 1979, 1981; Zodhiates, 1984, 1990). The English work "example," means pattern, a copy, a model, a way of very comprehensive signification, which is proposed or proper to be imitated (Webster, 1828; Russell, et. al., 1939). In one HRD definition it means "walking the talk," not a mentality of "do as I say, not as I do," but with the notion that " if we model the thing we are talking about, we will get it right yet" (Henschke, 1998b).

Results, Conclusions, and Limitations

On the one hand, as one looks at the words presented, the first two words -- performance and do -- are synonyms. In HRD, they carry the importance of accomplishing the things crucial to the organization levels of organization, process, and individual; and the organization outcomes and drivers performance domains within the mission, process, critical performance systems, and individual. However, it seems that one does not become able to perform at any level of competence or within any context without some process of learning taking place to prepare the person for performing within the organization's levels and domains to accomplish the organizations goals, and even the mechanical aspects of the organization to perform.

On the other hand, the subsequent ten words -- learning, teach, instruct, guide, lead, train, learning organization, hearken, wisdon, and model -- have somewhat synonymous definitions. In HRD, they carry their meaning not in a vacuum, but only in relationship to preparing people through learning processes, as well as the mechanical aspects (which are also implemented by people), to learn, not for their own individual purposes, but to learn in order to perform the purposes of the organization. It seems that the two groups of terms, although separate and distinct, in the HRD context they are both key ingredients.

Moreover, the English word combination -- example/way/model -- which is encompassed in the Hebrew word "derekh," and the Greek word "tupos," offer an additional insight into the nature of the four wonderful things which are reflected in the use of the Hebrew word. It appears that "learning" and "performance" in this setting are two sides of the same coin. It is the worthy performance of the eagle to fly in the air, but it does not come by that automatically; and the young eagle needs to learn to fly and to be taught by parent or more experienced eagles to fly, which is the nature of eagles. It is the worthy performance of the serpent to wind its way around a rock, but it does not come by that automatically; and the young serpent needs to learn to wind and to be taught by parent or more experienced serpents to wind, which is the nature of serpents. It is the worthy performance of a ship to pass through the sea, and it does not do that automatically; but comes by that when it has a rudder giving it direction and a captain who has learned and been taught by veteran captains what one does to guide a ship successfully through the heart of the sea. Finally, it is the worthy performance/way of a man with a maid to have sexual intercourse with her, and he does not come by that automatically; but he must grow mature enough biologically, and learn and be taught by parents, others more experienced, written materials and/or trial and error to accomplish that sucessfully.

Consequently, it seems that we can conclude that the terms "performance" and "learning" and the related terms from Hebrew, Koine Greek, English, and HRD sources are all mixed together in this comprehensive term -- example/way/model. This term has a much broader definition and meaning that any one of the terms separately, and may give coherence to the overall importance of both ingredients, performance and learning, as being key ingredients within HRD.

One limitation of research into this area is that it has practical validity only for those who acknowledge that word definitions and meanings, from both ancient and modern sources, are important sources of data for shaping the HRD Field, and helpful in sculpting its future course of action in accomplishing the purpose of HRD within organizations. Another limitation is that the value of this research will partially be determined by the extent to which further studies in the future are conducted in this area of inquiry.

How This Research Contributes to New Knowledge in HRD

This research contributes to insight that "performance" and "learning" are not mutually exclusive terms as had been implied or espoused in some of the literature cited within this paper, and some quarters of the HRD Field and the AHRD. This research further contributes the idea that the two terms are both complementary parts of a comprehensive whole perspective which gives direction to and drives the HRD Field. In addition, this research could provide for the HRD Field a much richer, fuller, and deeper understanding of the meaning and importance of HRD as a worthwhile scientific endeavor. Finally, those who have found themselves on either side of this discussion up until now, may be able to join forces and unite their energies in a new way for collaborative efforts to mutually benefit the AHRD, the HRD Field and the constituencies served by HRD.

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Developing Managerial Competence: Does It Improve Performance?

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The level of training and qualification of UK managers lags that of competitor nations, so it is important to focus management training and development where it will be most effective. This study found evidence that management development improved performance at the level of individuals and businesses. Moreover, development was shown to be more effective when linked to organizational strategy and when based on the occupational standards for managers established by the Management Charter Initiative.

Keywords: Management Development, Competence, Performance

It is a recurrent theme that UK managers are inadequately trained and qualified in comparison with those of competitor nations. As post-war demand for trained managers increased (Clements, 1958: 158), British industry was seen to be handicapped by a shortage of suitably qualified managers (McGivering, Matthews and Scott, 1960: 79). The general lack of qualifications among senior managers in the UK has been repeatedly noted over the years (Legatt, 1972; CBI, 1989). In 1987 two reports were produced as part of a review of management education and training, prompted by the recognition that the UK lagged behind other industrialised nations in terms of its formal management education, and the belief that developing managers would improve the competitive advantage of UK industries (Handy et al., 1987; Constable and McCormick, 1987).

An increase in the amount of management development (MD) is widely viewed as neccesary to remedy these deficiencies and has been linked with the attainment of competitive advantage in recent public policy documents. The Cannon and Taylor Working Party Reports (IoM, 1994) arising out of the 1992 Institute of Management review of MD, confirmed the need for the effective development of existing managers in order to raise the competitiveness of British industry. These reports noted that the challenges of organizational changes, especially contracting out, de-layering and empowerment, make the need for MD particularly acute. The situation was seen to be exacerbated by persistent structural unemployment, competitive pressures from low-wage economies, rapid technological change and standards in education which are inappropriate to the needs of employers. The recognition in European Commission White Papers (1994) that skills must be raised at all levels if European enterprises are to compete in global markets, re-surfaced in successive Competitiveness White Papers in the UK (DTI, 1994; 1995).

Following the adoption of a competence-based approach to vocational education and training, the Management Charter Initiative (MCI) developed Occupational Standards describing the competences which managers need. With renewed concern over developing the UK managerial workforce, the Employment Department (now the Department for Education and Employment, DfEE) decided to appraise the use of the Management Standards developed by MCI. The study subsequently undertaken on behalf of the DfEE, investigated the business benefits that could be attributed to competence-based management development (CBMD) in a range of organizations. The research addressed five hypotheses:

- CBMD improves individual performance (IP)
- CBMD improves organizational performance (OP)
- CBMD improves business performance (BP)
- improvements in IP, OP and BP are more likely if CBMD is linked to organizational strategy (OS)
- improvements in IP, OP and BP are more likely if HRD processes are based on a common, coherent integrated set of competence statements (i.e. the MCI Standards).

This paper reporting on the study is organized into three sections dealing with, respectively, the methodological approach, the empirical evidence relating to the hypotheses outlined above and the overall conclusions and policy implications of the findings.

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Methodology

Despite an established literature supporting the crucial role of HR in improving organizational performance and sustaining competitive advantage (Arthur, 1994; Carter and Lumsden, 1988; Coopers and Lybrand, 1992; Cutcher-Gershenfeld, 1991; Downham, Noel and Prendergast, 1992; Huselid, 1995; MacDuffie, 1995), there is a paucity of robust evidence capable of building a 'cumulative body of knowledge' (Becker and Gerhart, 1996: 790). In the absence of a common, coherent conceptual framework, there is little scope for comparison between the different studies until theory has been advanced by developing 'specific, testable propositions' (Becker and Gerhart, 1996: 791) and elaborating 'more complete structural models' (p.793). Given the 'causal ambiguity' concerning the mechanisms by which HR practices translate into improved business performance (Barney, 1991), more rigorous methods of analysis are also required, with studies reporting regression coefficients reflecting 'the *magnitude* of the effect of HR on organizational performance' (Becker and Gerhart, 1996: 791).

In practice, however, there are difficulties in measuring the effects of developing people (Harrison, 1993), and the reported benefits of MD are often anecdotal and confined to a single aspect of performance. The literature (see summary in Winterton and Winterton, 1997) nevertheless provides some indication of the nature of benefits which are anticipated from MD in relation to each of the hypotheses outlined above. In the case of individual performance, the literature demonstrates above all else the difficulties of measurement and attribution associated with identifying performance improvements arising from MD. In relation to organizational performance, the key message is the importance of developing collective knowledge so that organizational capacity is not adversely affected by individuals moving jobs (Brooks, 1994). With business performance, much of the literature links the achievement of critical success factors to the management capability of organizations (Berry, 1990). There is much emphasis on the need to link MD with organizational strategy (Taylor and Thackwray, 1995) and that the benefits to the organization should be identifiable (Mitrani, Dalziel and Fitt, 1992). Finally, recent literature contains claims that MD is more effective where HRD systems and procedures have adopted the MCI Standards (King, 1993).

Case Study Design and Fieldwork

Methodological difficulty is undoubtedly a major reason why systematic investigation of the effect of MD on performance is rarely attempted. In recognition of these difficulties, the Employment Department established an expert study group in advance of commissioning the research to identify an appropriate methodology for tracing and measuring the business impact of CBMD (Leman et al, 1994). The study group considered a variety of methodologies and recommended an embedded, multiple-case study approach to investigate the impact of CBMD and the adoption of the Management Standards. The study group offered a tentative case study design including the data collection protocol that specified the written evidence required and recommended detailed interviews with key respondents in each organization.

The initial case study protocol from the study group report was operationalised, piloted and refined by the authors once the research was commissioned. The protocol defined the written evidence which was to be examined in relation to each hypothesis, the range of measures of performance to be considered and the interview schedules which were to be used for in-depth, semi-structured interviews with senior strategic managers (chief executive, finance director and head of human resources), line managers and junior managers. The protocol is contained in the official report of the study (Winterton and Winterton, 1996).

In order adequately to test the conditional hypotheses, it was necessary to include organizations that did not use the Management Standards as well as users, and to include organizations in which MD was not linked with OS as well as those where there was a clear link. For each of the four categories so defined, the objective was to identify five organizations suitable for case study. Information had to be gathered from potential case organizations *before* any fieldwork took place in order tentatively to allocate them to one of the four categories. Contenders for study were identified from discussions with MCI, the DfEE steering group, and from previous research. The organizations were to be drawn from a range of different economic sectors, and it was intended that one third of the organizations studied should be SMEs (fewer than 200 employees).

The MCI supplied details of 25 organizations known to have adopted the Management Standards and a second tranche of 18 organizations, known to practise CBMD but not thought to be users of the occupational standards, was also identified. Each organization was approached by the DfEE and the researchers by mail initially and then by telephone and meetings were held with senior management to negotiate access. Difficulties in achieving access, particularly to SMEs, made it necessary to approach further organizations and out of a total of 126 organizations approached, 16 cases were selected for detailed study from those that agreed to collaborate. The cases were slightly

biased in favour of users of the Management Standards, and in favour of those claiming that MD was closely linked with OS.

As a minimum in each case, face-to-face interviews were conducted with the three senior strategic managers, four line managers and four team members. Multiple sources of evidence were collected to increase the reliability of data through triangulation and interlocking questions in the interview schedules were designed to test for consistency between the views of managers at different levels. Details of improvements in performance and of HRD systems and processes were collected through an extensive range of written evidence. Managers' job specifications gave an indication of the extent to which responsibility for MD was a feature of their role, while company accounts were examined as evidence of improvements in BP.

Evaluation and Ranking of Case Reports

A dossier was compiled of written evidence and interviews for each organization studied, and a case report was written in accordance with the protocol. The case reports provided background details of the organization, details of the organizational strategy, the HRD systems and processes, and the evidence of the improvements in IP, OP and BP which were attributed to MD by respondents. The case reports were validated with two senior managers in the organization and revised before being evaluated and used in the cross case analysis.

To test the five hypotheses, a team of independent experts was asked to rank the cases according to the extent of improvements in IP, OP and BP attributable to MD, the degree to which MD was linked to OS and the extent to which the Management Standards had been adopted in HRD systems and processes, against the criteria outlined in the report of the study group. The evaluation was co-ordinated by an expert on the Management Standards who had participated in the original study group but had not been involved in the case studies; she was therefore familair with the protocol but was not biased by knowledge of particular cases.

The rank order of the cases according to the three performance measures and the two defining characteristics was used to structure the cross-case analysis. The rankings made it possible to test for any correlation between the defining characteristics and performance improvements measured at the three levels, as well as correlation and concordance between the three performance measures themselves. In addition to the case study evidence, therefore, the hypotheses were examined using robust non-parametric techniques. The results of the statistical tests are reported in the concluding section.

Empirical evidence

The dossiers for each case study were too extensive to be included in the official report of the research (Winterton and Winterton, 1996) although abbreviated case reports are included in the extended account of the study (Winterton and Winterton, 1999). A selection of the evidence is considered below in relation to the hypotheses outlined in the introduction.

Individual Performance

In the cases demonstrating the most robust evidence of improvements in IP, the central importance of MD was demonstrated through written evidence and corroborated interviews. The improvements included increased personal confidence, awareness of potential and continuous development of general managerial skills and competences. Managers reported having a better understanding of both organizational objectives and their individual responsibilities. A range of efficiency gains were attributed to MD, such as better planning and time management, more effectiveness in running meetings, and improvements in project management, change management and problem solving. Increased competence in managing people was also cited, especially through raising skills in communications, presentation, leadership and motivation. Middle management mentioned empowerment, faster individual career advancement and a more methodical approach to developing others.

Improvements in IP were clearly associated with the use of the Management Standards and the implementation of NVQs, which provided criteria for performance, facilitated best practice benchmarking and promoted new ways of conceptualising work tasks. With the Standards, individuals take responsibility for, and can track, their own development, and this is associated with increased commitment and motivation.

In the organizations which provided less robust evidence that IP had improved, there were nonetheless examples of specific changes in IP arising out of MD activities. In other organizations, isolated examples of IP gains were cited, but these were more a consequence of ad hoc initiatives than the result of operating a coherent MD

framework. Towards the lower end of the ranking, there was ambiguity in relation to reported improvements in IP, difficulties of measurement and of attributing improvements to MD. In particular, there were difficulties in separating IP from OP measures, and systematic measurement and evaluation was thought to be too costly. It was also noted that the outcomes of development vary between individuals and that the effects are difficult to isolate when other major changes are taking place.

Organizational Performance

Where there was most evidence of improvements in OP attributed to MD, these typically related to process issues such as quality of service, better focus on customer needs, reduced queues, better telephone standards and improved customer relations. Managers in some organizations cited evidence of more strategic behaviour and identified better procedures and monitoring of actions. Cost reductions, efficiency gains and more effective debt control were also reported. Other examples of improved OP arising from MD included improved procedures for controlling and handling materials as well as the identification of potential areas for improvement in the future such as new information systems.

Improvements in OP attributed to MD initiatives designed to promote team working included greater flexibility, awareness of team responsibilities and more effective team working. Both inter-personal and inter-departmental relations improved as a result of better communications, and individuals were also said to demonstrate increased commitment and motivation. In one case, managers identified improved team performance, such as more 'flexibility and commitment', as a result of MD introduced to support business process re-engineering. In another case, improvements in OP as a result of MD initiatives were visible in the changes in team behaviour, including performance and the dynamics of work groups.

Major difficulties of measurement of OP and of attributing improvements to MD were encountered, especially where the same measures were used for OP and IP, and where OP was regarded as a function of a manager's performance. Equally, OP was difficult to separate from BP and was seen to be affected by extraneous factors.

Business Performance

The organizations which were ranked highest displayed quantified, written and corroborated evidence of improvements in BP, and respondents were unequivocal that MD had contributed to all prime measures of business efficiency. In such organizations, managers emphasised increased turnover and profit, sales and revenue growth, increased market share and competitiveness. Productivity, efficiency and quality gains were important factors, as was decreased unit costs. Other benefits reported were reductions in arrears and stock holding, shorter waiting times and queues, and reduced staff turnover.

In cases which were ranked lower than the best, evidence was provided of specific business benefits, which were largely attributable to MD activities. Where improvements in BP were identified, the extent to which these were attributed to MD initiatives varied from the unequivocal cases where they would have been impossible without MD, to cases where the contribution of MD was implicit. Other cases showed how MD was the major, but not the only, contribution to success, or how MD was a necessary factor, in conjunction with other changes.

Problems of measurement of BP were most serious in the weaker cases, and largely arose from the interaction of other factors affecting BP, while difficulties of attribution were a consequence of being unable to produce counter-factual evidence of what would have been the BP outcome in the absence of MD initiatives. In cases where improvements could not be attributed unambiguously to MD, few attempts had been made to measure its impact.

Organizational Strategy

In the cases where written evidence and corroborated interviews showed how OS and MD were inter-related, the links between the two were pervasive and demonstrated in a variety of ways. Typically, MD was shown to be an intrinsic part of the business plan, and to support strategic priorities. Business objectives were shown to be linked to OS through defined competences, strategic objectives were mapped onto performance standards, and personal development plans related to business plans. Roles and responsibilities for MD were devolved to individuals and their line managers, with only limited HR intervention, thereby embedding MD within OS.

Major changes provided both the opportunity and necessity of linking MD to OS, and MD initiatives responded to changes in the organization's environment. Extensive restructuring or business process re-engineering (BPR) provided opportunities for linking MD to OS and focused attention on the competences required to achieve the

organizational transformation. Throughout, the MCI Standards and NVQs were seen to provide a structure for the links.

Even where the links between MD and OS were less clear, there was some evidence of MD initiatives to support specific aspects of OS. In other cases, problems were identified in establishing the link, for example difficulty in identifying which competences would improve BP. Also, MD was found invariably to lag OS where this was dynamic, and immediate priorities inevitably took precedence over longer-term strategic MD. An apparent paradox was also highlighted between devolving responsibility for MD and linking it to OS, since much MD is focused on the needs of the individual, not the organization.

HRD Systems and Processes

In four organizations, the Management Standards were comprehensively adopted in HRD systems and processes. In these organizations, all or most MD activities were competence-based. The Management Standards were central to appraisal, training and development, although they were used less extensively in job descriptions, recruitment and remuneration.

Written evidence and corroborated interviews demonstrated the ways in which the Standards were adopted and the benefits of building MD initiatives around the MCI Framework. The major benefit identified from adopting the Management Standards was the coherent structure which they provided for training, MD and personal development. Gaps in competence, for example, are more readily identified through appraisal, training and development needs are specified more precisely in relation to the competences required for individuals to meet the needs of the organization, and there are clear criteria for human resource planning and career succession. In addition, MD is linked to a qualifications framework.

In three cases, the Management Standards had been partially adopted, and were used to a limited extent in some HRD systems and processes. The remaining nine organizations had either not attempted to adopt the Management Standards or had only made limited progress in this direction, so that they were regarded as non-users. The research identified some limitations to the adoption of the Management Standards both in the extent to which they have percolated through an organization and in the range of HRD systems and processes involved. The main limitations were that the Standards are not extensively used in recruitment and selection, other than in relation to job profiles, and reward and remuneration systems are rarely linked to the achievement of competences defined in the Standards. Additional criteria are sometimes used alongside the Standards, especially in relation to specific technical competences, and familiarity with the Management Standards is less extensive outside the HR specialists.

Conclusions

The sixteen organizations provided very positive and highly significant results demonstrating performance improvements as a result of MD. Despite the difficulty of measuring performance, and especially OP, the three measures of performance are significantly correlated. The overall coefficient of concordance between the rank orders of IP, OP and BP is significant at the 1 per cent level (Kendall's $w = 0.796$), showing that the rank position of an organization in terms of one performance measure is similar to its rank position for another performance measure. Moreover, as Table 1 shows, each pair of performance measures correlates at the 5 per cent level or better, especially in the case of IP and BP (Spearman $R_S = 0.797$). Of the three performance measures, OP was the most problematic, but the significant rank correlation coefficients suggest that OP can be 'captured' adequately by IP and BP measures.

Significantly, the results of the rank correlation also provide support for the conditional hypothesis that MD is more likely to improve performance when it is linked with OS. The Spearman rank correlation coefficients between OS and both IP and BP are significant at the 1 per cent level. Paradoxically, there is no significant correlation between OS and OP, which may reflect the difficulties of measurement and attribution already identified. In the case of IP and BP, these results offer unambiguous support for the importance of linking MD to OS in order to realise business benefits.

The rank correlations also provide support for the conditional hypothesis that MD is more likely to improve performance when HRD systems and processes are based on the competence statements in the MCI Standards. The Spearman rank correlation coefficients between HRD and both IP and BP are significant at the 5 per cent level, although again there is no significant correlation between HRD and OP. In the case of IP and BP, these results again offer support for the importance of developing MD around the Management Standards in order to realise business benefits.

Table1

Spearman rank correlation coefficients

factor	OP	BP	OS	HRD
IP	0.635	*0.797*	*0.863*	0.611
OP		*0.650*	(0.411)	(0.170)
BP			*0.658*	0.548
OS				0.575

Key:
IP = rank in terms of evidence of individual performance improvements attributed to MD
OP = rank in terms of evidence of organizational performance improvements attributed to MD
BP = rank in terms of evidence of business performance improvements attributed to MD
OS = rank in terms of evidence of link between organizational strategy and MD
HRD = rank in terms of evidence that HRD systems and processes are based on the Management Standards.
Statistical note:
For 14 degrees of freedom, $R_{S\,(0.01)} = 0.645$; $R_{S\,(0.05)} = 0.456$
In the table, *correlation coefficients in italics are significant at 1 per cent*, others are significant at 5 per cent, (results in brackets are not significant at the 5 per cent level).

Three policy implications follow from the above conclusions, relating to the performance measures which should be used to monitor the business benefits of CBMD, linking CBMD to organizational strategy, and adopting the Management Standards.

First, the performance measures which are most reliable for monitoring the business benefits of CBMD are individual and business performance, which correlate with, and therefore probably also incorporate, the less tangible organizational performance measures. The strength of the link between CBMD and both individual and business performance suggests that CBMD should be promoted with the message that *developing people contributes to business success*.

Second, performance benefits are more likely to arise from CBMD where this is strongly linked with organizational strategy. The link between CBMD and organizational strategy should be seen as complementary to the value of developing people since this is the mechanism through which the development of individuals contributes to business performance. In policy terms, these findings provide further support for the *Investors in People* approach, through which development is linked to business strategy.

Third, performance is improved additionally where organizations adopt the Management Standards as a framework for development within HRD systems and processes. The additionality is important and provides support for further promoting the *MCI Standards*, encouraging their adoption by organizations to provide coherence in CBMD and to support mobility within the managerial work force.

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PROCEEDINGS

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Volume 2

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1999 CONFERENCE OVERVIEW
Sheraton National Hotel ◆ Arlington, Virginia
March 3 - 7, 1999

The Academy of Human Resource Development

Conference Theme:

Thursday, March 4	Time	Friday, March 5	Saturday, March 6	Sunday, March 7
Preconferences 12:00, Wednesday, March 3, 1999 through 12:00, Thursday, March 4, 1999	7:00 AM to 8:15 AM	Food-N-Thought Discussions (3), Join in! Global 100 Breakfast and Meeting *EXHIBITORS OPEN*	Food-N-Thought Discussions (3), Join in! Global 100 Breakfast and Meeting Foundation Board Breakfast Rosemary Wentling, Chair	⊃ AHRD Board Breakfast Food-N-Thought Discussions (3), Join in!
⊃ IFAL- Action Learning ⊃ Performance in HRD ⊃ Integrity in HRD ⊃ Globalization in HRD	8:30 AM to 10:00 AM	***--Keynote Presentation--*** **Patricia A. McLagan** **President,** **McLagan International**	***--Keynote Presentation--*** **AHRD Professional Ethics Committee** **Standards on Ethics and Integrity** **for the Academy of Human Resource Development**	**SYMPOSIUMS** Workplace Learning Transfer of Learning Change Processes Research Forum Qualitative Studies Interpersonal Dynamics
Conference Registration Opens	10:15 AM to 11:45 AM	**SYMPOSIUMS** Adult Learning in the Workplace Advances in Distance Learning Learning and Working in Groups Workplace Diversity Issues Learning Organization Issues *Innovative Session* *Scholar-Practitioner Perspectives*	**SYMPOSIUMS** Facilitating Organizational Change Evaluation in HRD New Perspectives in HRD Academy Journals Integrating Learning and Performance *Innovative Session* *Integrating Technology*	***--Keynote Presentation--*** **Dr. Rosemary Harrison, UK Professor of HRD and author of "People and Organizations: Employee Development"** ***HRD and The Business: turbulence, turmoil and strategic direction***
12:00-5:00 AHRD Board of Directors Meeting 1:00-5:00 Local Tours 3:30-5:00 AHRD Committees	12:00 to 1:30 PM	**SYMPOSIUMS** Managers and Learning Linking HRD Theory & Practice *Innovative Session* *Workplace Spirituality* *Poster Session* Research Forum of Emerging Issues Food-N-Thought Discussions (2) Join in! Advances Editorial Board Meeting and Lunch	**SYMPOSIUMS** Individual Learning Evaluating HRD Impact Changing Workplace HRD in UK HRD Professional Development Food-N-Thought Discussions (2) Join in! ASTD Research Committee/AHRD Board Luncheon	AHRD Business Meeting for all Academy members
3- 5:00pm Academic Showcase hosted by Va Tech and GWU 5:00pm - 6:00pm HRD Student Reception	1:45 PM to 3:15 PM	**SYMPOSIUMS** Instructional Technology Informal Workplace Learning Workforce Issues Facing HRD Enhancing Employee Skills International HRD Perspectives	**SYMPOSIUMS** Measurement and Research Tools Workforce Development Individual Differences in Learning Linking HRD Practice and Research *Innovative Session* *Analyzing Performance Analysis*	Lunch and hotel checkout
6:00pm - 7:00pm Grand Reception & Conference Overview **7 - 8:30pm HRD Town Forum** **Certification of HRD Professionals, Products and Academic Programs:** **The Role of the Academy of Human Resource Development** 9:00pm HRDI Editorial Board Mtg. & Dinner	3:30 PM to 5:00 PM	**SYMPOSIUMS** Organization Structure and Strategy University HRD Programs HRD Issues in Asia Knowledge Management *Innovative Session -Action Learning*	**SYMPOSIUMS** Contextual Learning Issues Career Issues in HRD Assessing Employee Performance Core Directions in HRD Culture Issues in Organizations	
	Evening Events	FREE EVENING 6:00pm HRDQ Editorial Board Mtg. & Dinner 6:00pm Global 100 Mtg. & Dinner	6:00-9:00pm President's Dinner & Awards Banquet for all conference attendees (included in registration)	

A Quantitative Examination of the Feelings and Cognitive Processes of a Group of Adults Undertaking a Tertiary HRD Program

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Mature adults who enter university late in life bring with them a variety of mental and emotional states. This paper examines the states of a group of adults in a tertiary HRD learning situation. Stimulated recall methodology was used in order to categorize the scope and extent of these aspects of the informants' covert behavior. Results indicated that the majority of thoughts and feelings were concerned with the behavioral moves of other students and their own self-performance.

Keywords: Adult Learning, Cognitive Processes, Feelings

This paper is a report upon one aspect of a broader study that researched the cognitive processes and feelings experienced by a number of adult learners undertaking a tertiary Human Resource Development (HRD) program. The broader study examined both the qualitative attributional analysis of adult learner covert behavior and the quantitative analysis of that behavior. This paper is only concerned with the quantitative analysis.

Adults entering tertiary study after years of work and a variety of formal educational experiences bring with them a range of mental states and affective situations. They differ markedly from younger students entering university directly from school who tend to be more homogeneous in their mental and emotional life. There is a need therefore to understand the myriad of cognitive processes and thoughts that these mature adults bring to the tertiary learning situation. By understanding these situations facilitators of adult learning can better structure learning experiences so that the needs of these adults are more effectively met.

Problem Statement and Theoretical Framework

The study is grounded in the humanistic, or phenomenological, tradition that postulates the individual, while learning, seeks greater personal adequacy, self esteem and self actualisation. Rogers (1965) indicates: "It (self actualising) has a quality of personal involvement – the whole person in both his feeling and cognitive aspects being in the learning event" (p. 5). In this tradition adult learners respond to the environment as each of them as individuals experiences it. Self becomes an important element in determining behavior to maintain and enhance self. Consequently, a phenomenological approach to the study as advocated by theorists such as Denzin and Lincoln (1994) seemed the most appropriate to access the phenomena of adult student life.

In accepting the stance that adult learners respond to a learning situation in their own idiosyncratic way it seemed logical to try and discover how adults actually did this. A search of the literature yielded little for adult learners. However, the literature is more revealing with children in classrooms. For instance, Wittrock (1986) indicated that research on children's thought processes:

> "studies the effects of teachers and instruction upon the student perceptions, expectations, attentional processes, motivations, attributions, memories, generations, understandings, beliefs, attitudes, learning strategies and metacognitive processes that mediate achievement" (p 297).

There have been studies of the thought processes of children while learning science (Eggin & Main,1990; Nakleh & Krajcik,1991; Jenkins,1995 and Shepardson & Jackson, 1997) and mathematics (Macmillan, 1990; Shannon & Curtin,1992; King. 1993 and Muth, 1993). However, apart from Verloop (1989), who examined the changes in cognition of student teachers while undergoing tertiary study, there appears to be little in the literature

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concerning the covert behavior of adult learners. This paper reports on a part of the research that attempts to fill that gap.

Research Questions

According to Denzin and Lincoln (1994), the type of research questions that fit the phenomenological paradigm are "meaning questions" or questions that elicit the "essence of experience" (p224). Consequently, because of the need to investigate the nature of adult students' thoughts and feelings as they enter tertiary study following workplace experience, and in order to better provide them with appropriate learning strategies, this paper is interested in exploring the following broad questions: What are the idiosyncratic thoughts and feelings that flow through the minds of adults while they are in a learning situation? What sorts of ideas, beliefs, views, emotions and lines of reasoning make up the learner's conception of self-performance? In what ways can these thoughts and feelings be categorized and counted?

Methodology

The study design involved stimulated recall methodology (King and Tuckwell,1983) which enabled both quantitative and qualitative data to be derived from interviews with the adult students. This paper reports the quantitative analysis of their thoughts and feelings. Each adult student was treated as a case study and the quantitative data contributed to the description and interpretations of the phenomena being analysed.

Four adults undertaking learning in a semester unit within a university HRD program were interviewed over a six month period about their thoughts and feelings concerning their conceptions of self-performance. The students were video-taped for the duration of a three hour training session on each of three occasions. Immediately on completion of each session the students were interviewed using the videotape for stimulated recall. Their responses were audiotaped and transcriptions created. The transcriptions were later examined for all statements that contained thoughts and feelings that the students reported as having occurred during the sessions. These thoughts and feelings were classified as interactive data and were distinguished from the non-interactive data, that is, those thoughts and feelings that occurred before or after the sessions. Non-interactive data were not coded.

Before each interview the student was reminded that the researcher was seeking recall of only those thoughts and feelings that occurred during the sessions. Clues to interactive data in the transcripts include statements beginning: "I was just thinking about..." and "I was feeling..."

The next stage of analysis involved unitization or segmentation. This means the data were divided into units of single thoughts or feelings. These units were sometimes contained in a few words, sometimes in a sentence, or even an entire paragraph.

Once this had occurred each thought and feeling was categorized. The category system used was CASSIT (Content Analysis of Students' Interactive Thoughts) developed by King (1979) and modified by this researcher to reflect the adult nature of the analysis. The nine categories of CASSIT used were:

Subject Matter – thoughts and feelings dealing with the content of the sessions.
Cognitive processes – thoughts dealing with the student's cognitions such as perception, knowing, remembering.
Behavioral Moves-Self – thoughts and feelings about any action the student was performing such as avoiding, seeking, attending.
Behavioral Moves-Student – thoughts and feelings concerning the actions, perceptions of other students.
Behavioral Moves-Facilitator – thoughts and feelings on actions concerning the facilitator.
Self-Performance-Thoughts – thinking about own performance, behavior, self attributions, self expectations.
Self-Performance-Feelings – emotions about own performance.
Feelings-(Positive & Negative) – emotions during the sessions other than those about self-performance.
Non Task-Related – any thought or feeling about off task behavior.

Intercoder and intracoder reliability statistics were calculated using Pearson's product-moment correlation coefficient. The researcher trained a colleague in the use of CASSIT and the colleague applied CASSIT to a sample of transcripts. The researcher revisited the data six months after the researcher's first coding. Both coefficients were sufficiently high enough for the researcher to conclude that the informants' thoughts and feelings were being correctly categorized.

Discussion of the Results

The results of the categorization for each of the four adult learners (real names not used) appear below.

Table 1

Percentage Distribution of Student Thoughts Over CASSIT Categories for Each Session: Gail

Categories of student covert behaviour	Session 1	Session 2	Session 3	Percentage of total
Subject matter	-	13.3	1.7	5.1
Cognitive processes	20.0	16.7	19.0	18.6
Behavioural moves – Self	1.7	5.0	8.8	5.1
Behavioural moves – Student	18.3	13.3	28.3	19.8
Behavioural moves – Facilitator	15.0	11.7	5.3	11.3
Self performance – Thoughts	18.3	20.0	5.3	14.1
Self performance – Feelings	26.7	20.0	31.6	26.0
Feelings – Positive	-	-	-	-
Feelings – Negative	-	-	-	-
Non task related	-	-	-	-

Gail reported the largest number of feelings about her own performance. These were particularly high in Session 1, dipped a little in Session 2 and dominated Session 3. She reported numerous feelings of anxiety, concern and worry alongside feelings of happiness and cheeriness.

She also reported a large number of thoughts concerning learning the subject matter: perceiving or being aware, knowing and remembering, justifying and reasoning. These remained relatively constant over the three sessions.

Gail's quantity of self performance-thoughts was high in the first two sessions but dipped markedly in the third. This could be accounted for by a significant increase in self performance-feelings. It was during this session that Gail reported feeling more comfortable with her own performance and was becoming increasingly aware of her own behavioural moves and those of her fellow students.

A comparison across sessions showed a significant dip in thoughts concerning other students in the middle session. This may be explained by a corresponding rise in self performance-thoughts that peaked during the middle session.

The decline in the number of thought units over the three sessions indicates a decreasing interest in the facilitator. This may be explained by the fact the facilitator had established a pattern of behaviour that became so

automatic Gail was no longer aware of his instructional moves. Similarly, there may have been more emphasis upon group and paired work to the extent the facilitator appeared to be redundant in her own mind.

The trend over the three sessions shows an interesting increase in the quantity of behavioral moves-self thought units. This trend indicated that Gail became increasingly introspective and self-analytical about her own performance and in the last session she reported above average quantities of thought units. Perhaps the experiences of the classroom were such that Gail became increasingly aware of her need to participate publicly.

Table 2

Percentage Distribution of Student Thoughts Over CASSIT Categories for Each Session: Sam

Categories of student covert behaviour	Session 1	Session 2	Session 3	Percentage of total
Subject matter	14.0	4.8	1.9	6.3
Cognitive processes	25.6	11.3	24.5	19.6
Behavioural moves – Self	2.3	1.6	-	1.2
Behavioural moves – Student	14.0	12.9	41.5	22.8
Behavioural moves – Facilitator	11.6	16.1	1.9	10.1
Self performance – Thoughts	11.6	17.7	20.8	17.1
Self performance – Feelings	16.3	22.6	9.4	16.5
Feelings – Positive	-	12.9	-	5.1
Feelings – Negative	-	-	-	-
Non task related	4.7	-	-	1.3

In Session 1 analysis indicated more than one quarter of all Sam's covert behavior was concerned with thought processes involved in learning the subject matter. This means he spent a lot of time involved in perceiving or being aware, to knowing or remembering, or reasoning about the content of the sessions. He was very much involved in intellectual activity that would assist his learning. While this dropped away in Session 2 it climbed back to a similar level for Session 3.

Self-performance feelings rank highly in Session 1. Sam demonstrated a large number of feelings concerned with a range of emotions subsumed under this category: anxiety, happiness, disappointment, worry. These climb dramatically to dominate Session 2 before fading in Session 3.

Sam reported a significant number of thoughts and feelings about other students: perceptions of their performances, inferences of their thoughts and perceptions about their behavior. Many such thoughts were concerned with observations of others' demonstrated intellect and manifestations of experience with the subject matter. Such thoughts totally dominated the third session where over 40% were concerned with others' behavior.

Interestingly, Sam reported no emotions at all that were negative such as annoyance, frustration and apprehension, and reported a significant number of positive emotions such as excitement, surprise and happiness in Session 2.

Overall, Sam appeared to be most concerned with his fellow students and the intellectual requirements of the program. In addition, he reported covert behavior that dealt with his thoughts and feelings about his own performance. He appeared to be aware of how he was coping with both learning the content and the actions of his colleagues.

Table 3

Percentage Distribution of Student Thoughts Over CASSIT Categories for Each Session: Dee

Categories of student covert behaviour	Session 1	Session 2	Session 3	Percentage of total
Subject matter	2.7	9.4	2.9	4.6
Cognitive processes	10.7	17.0	11.8	12.8
Behavioural moves – Self	10.7	1.9	2.9	5.6
Behavioural moves – Student	25.3	7.5	35.3	24.0
Behavioural moves – Facilitator	13.3	9.4	10.3	11.2
Self performance – Thoughts	18.7	35.8	10.3	20.4
Self performance feelings	18.7	18.8	23.5	19.9
Feelings – Positive	-	-	-	-
Feelings – Negative	-	-	4.4	1.5
Non task related	-	-	-	-

Dee, in Session 1, reported a high percentage of thought units dealing with perceptions of other students. This is understandable considering that when entering any new situation people show a lot of interest in those around them. While this concern dropped away in Session 2 it dominated Session 3. In this latter session, Dee reported concern with the domination of a number of students who were "grandstanding" in front of the group.

Thoughts and feelings about self-performance ranked highly in the first session and these continued to predominate throughout. There were no positive feelings reported but in the final session some negative feelings were generated.

Dee indicated minimal thoughts about cognition and even less about the subject matter. There were no off task thoughts reported at all.

In summary, Dee, like Sam, reported more thoughts about other students than any other category, though when self-performance thoughts and feelings, and feelings not associated with self-performance, are aggregated, these comprise nearly half of her covert behavior.

Table 4

Percentage Distribution of Student Thoughts Over CASSIT Categories for Each Session: Pat

Categories of student covert behaviour	Session 1	Session 2	Session 3	Percentage of total
Subject matter	36.1	1.25	2.6	13.3
Cognitive processes	-	13.8	23.1	11.1
Behavioural moves – Self	18.0	-	-	6.1
Behavioural moves – Student	8.2	3.8	12.9	7.2
Behavioural moves – Facilitator	14.8	-	2.6	5.6
Self performance – Thoughts	6.6	3.8	2.6	4.4
Self performance –Feelings	16.4	12.5	28.2	17.2
Feelings positive	-	37.5	28.2	22.8
Feelings negative	-	15.0	-	6.7
Non task related	-	12.5	-	5.6

Pat's first session is dominated by reports of thoughts about the subject matter – its concepts, operations and applications. There is an amazing drop off in reports of this in the following sessions that might have indicated a decline in interest or an increasing familiarity with the content. This decline is off set by a large increase in positive and negative feelings outside of those associated with self-performance and a large quantity of non-task related thought units in Session 2.

Session 2 also indicated no reported thoughts at all concerning his own behavior and the behavior of the facilitator. This trend is repeated to a lesser extent in Session 3.

Unlike the other subjects of this study Pat shows only minimal concern with the behavior and actions of his fellow students and for that matter, the facilitator. His large scores in categories dealing with his own feelings, mostly outside of his self-performance, indicate a tendency towards intrinsic learning – perhaps an interest in his self actualisation.

Conclusions

The conclusions that can be drawn from the study suggest the kind of mental and emotional life that adult students entering university seem to experience. Four case study subjects preclude generalizations about adult learners but, from a heuristic sense, the plausibility of the phenomena analyzed indicates some validity of the wider population. The analysis of four adult learners' covert behavior goes some way into indicating the type and extent of the thoughts and feelings that other such adults may experience during a university learning experience. These thoughts and feelings are mostly about other students – interactions with them, perceptions of their behavior and performance and inferences of their thoughts. Such a finding supports the belief that adults, in a learning situation, are keenly interested in their fellow students and are quick to measure their own experience and learning against their perceptions of what others have already achieved or are currently demonstrating.

Feelings about self-performance also rank highly. Adult learners are anxious about not coping, excited when they achieve, get disappointed with low grades and worry about how their performance is affected by outside pressures. As well, it is logical that thoughts about self-performance also predominate. Adults constantly monitor their success and failures, spend energy in causal explanations of self-performance and are forever contemplating future success or failure.

Contrastingly, the results indicated these adults spent little time pondering about actions they performed, or considered performing, in relation to the learning process. They did not report many motives, desires or intentions to either seek or avoid public participation or to attend or not attend. They also reported limited interest in the behavioral moves of the facilitator – his instructional moves, reactions, interactions and overt behavior. The reasons for this could be that each session was group-based and there was little direction from the facilitator. What interest was shown by the research group concerned comparisons between their own instructional style and that of the facilitator. Perhaps a group of non-trainers would have downgraded this interest even further.

Limitations

This paper only reported the quantitative analysis that was applied to the four adult learners and therefore only tells part of the story. The rest of the story looked into the attributional analysis of self-performance covert behavior. For example, how did the adults explain their behavior? How consistent were those explanations to profiles of explanatory styles and conceptions of learning that they previously reported? The limitations normally applied to any phenomenological research can also be applied to this: subjectivity, researcher bias (despite the reliability and validity checks), reliance upon the memory of the informants and the lack of generalizability.

Contribution to New Knowledge

However, as a microanalysis of the reported thoughts and feelings of four adult learners, and despite the above limitations, there is some contribution to the understanding of the adult in the learning situation. Thoughts and emotions play an important part in the learning process for adults. The research literature would suggest that high frequency and wide diversity of self-oriented thoughts and feelings are likely to mediate the effectiveness of student learning (Wittrock, 1986). The adults in this study reported a huge range and extent of such thoughts and emotions.

This has implications for facilitators that seem to have been insufficiently emphasised in adult learning. Therefore, facilitators of adult learning neglect this information and probable consequence at their peril. Facilitators need to view the student as a whole person and restructure learning experiences for adults accordingly. They need to be open minded, less dogmatic, warm and more encouraging of student self-directedness. They should be seen as helpers who provide a learning climate in which the adult can feel free to develop emotionally as well as intellectually – be that in a training room or in the workplace.

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The Cycle of Awareness Development: A Cognitive and Psychosocial Theory of Adult Development

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An individual's perspective is a function of awareness development around life events, affecting the individual's attitude and behavior. This phenomenon inhibits communication, understanding, and the ability to move beyond reaction to the event. A framework is needed to help individuals understand themselves and others in reaction to life events and to assist in moving beyond dysfunctional reaction. Qualitative data suggest a five-stage cycle of awareness development. Implications for HRD practitioners are discussed.

Keywords: Development, Diversity, Critical Life Events

Problem Statement

When four people on different corners of an intersection see an altercation between two vehicles in the middle of the intersection, the individuals will likely differ in their description of what happened based on their perspective of the altercation. Similarly, when two individuals are confronted by a life event or issue, they will differ in their reaction to the issue based on their perspective or meaning schema (Schon, 1987). The individual who has successfully weathered a downsizing in his or her organization is at a different stage of awareness development than the individual who is in the middle of dealing with the anger and frustration of the restructuring.

The phenomenon that individuals view the same life event from their own perspective is problematic because it obstructs communication and understanding about the event and the individual's subsequent attitude and behavior. This in turn inhibits the ability to move beyond the reaction to the event to a position for effectively dealing with it. In the literature, much is said about the need to understand where another individual is coming from in order to lead, manage, or work effectively with them (Bennis & Nanus, 1985; Covey, 1989; Katzenbach & Smith, 1993; Roberts, 1985). A framework is needed to help individuals understand themselves and others in reaction to life events. The framework should enhance understanding, as well as assist in moving beyond any dysfunctional reaction to an event.

Theoretical Framework

Nothing in the literature is said about a repeating pattern or cycle of awareness development around life events transitions, and other issues. Theories on life-span development traditionally focus on life stages, or the changes that occur as the individual ages (Erikson, 1950; Levinson, 1978). These theories associate adult development with the sequence of life events—a linear approach. Other work has examined the rhythm of life events in a cyclical approach (Neugarten, 1979; Neugarten & Neugarten, 1987; Schlossberg, 1984). Numerous issues affecting adult development confront individuals during their lifetime. Some of these issues are closely tied to significant life events, such as entering school, starting work, a change in marital status, and the death of a family member. Other issues may not be directly tied to significant life events, yet still affect adult development (e.g., violence, terminal illness, substance abuse, harassment, discrimination, oppression).

Hypothesis

This paper focuses on understanding the repeating pattern or cycle of development, rather than attempting to use life events, transitions, or issues themselves as demarcations of development. The hypothesis is that an individual's perspective is a function of his or her awareness development around life events. The individual's perspective affects the individual's attitude and behavior. The theory proposed in this paper attempts to address several questions, including: Why are some individuals are more sensitive than others to the issue/event at hand? Why do

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some individuals not even recognize an issue/event at hand? How can practitioners explain, interpret, and predict an individual's attitude and behavior based on the individual's stage of awareness development?

Research Design

This paper proposes a theory of adult awareness development. While no formal study has been undertaken to date, qualitative data obtained over the last five years from participants in executive training programs, career counseling sessions, and management consultation work provide the data yielding the phenomenon of adult awareness development under study. A structured interview protocol to obtain data on the phenomenon and theory was developed in December 1998. The interview protocol will be used to validate the theory through formal qualitative research in 1999.

Results and Findings

The data suggest a five stage cycle of awareness development repeating around the life events and issues confronting the individual. The theory addresses cognitive and psychosocial development, linking the data to the psychology, sociology, education, and anthropology literature. The five stages in the cycle of awareness development are pre-encounter, intellectualization, encounter, empowerment, and integration.

Pre-encounter

When an individual has no experience with the issue, the individual is at the *pre-encounter* stage of awareness development. The individual has no perception of the issue in terms of self or others (e.g., the man gives a cursory glance at the newspaper headline reporting that a woman was assaulted and raped in the neighborhood). The individual has not actually experienced it personally or recognized it in relation to others (e.g., "I don't do drugs and I don't associate with people who do"). They do not understand it because it is not a part of their world view (e.g., the white male who has no concept—knowledge or experience—of discrimination).

Given this state of development, the individual would not recognize the issue even if it were thrust upon them. The pre-encounter stage shown in the older gentleman who doesn't see the need for going to mandatory sexual harassment prevention training because, "I don't harass and there aren't any women in my shop." Sexual harassment is not an issue in his world. The man or woman in pre-encounter who knows nothing about marital discord because, "I'm in a good marriage and everyone I know is also." Marital discord is not an issue for them.

In describing the eight ages of man, Erikson (1950) describes the evolution of individual identity. Based on this evolution, the awareness development stage of pre-encounter would likely precede the early stages of identity development, during childhood and adolescence. This is, however, not the case. Although the issue may be in the individual's unconscious, individuals may move well into adulthood before having cognition or experience with any of the issues or life events discussed in this paper.

Intellectualization

As the individual starts learning about an issue, they move into the second stage of awareness development, *intellectualization*. This stage focuses on cognitive development around the issue, or encounter from the neck up. The individual begins to recognize the issue, yet there is little or no emotional involvement (e.g., "Yeah, I guess finding a cure for AIDS is important, but that doesn't affect me."). Intellectualization creates a sense of invulnerability. The spouse in intellectualization about the makings of a solid marriage despite the high divorce rate in her occupation, says, "We take care of things in our marriage, so that won't happen to us." The white male moving into the intellectualization stage begins to understand that workplace discrimination occurs, yet thinks that if he works hard and keeps his nose clean he will steadily advance up the corporate ladder. The older gentleman intellectualizes that sexual harassment might become an issue if a woman were to enter his work group, but thinks he doesn't need to worry about it till then.

The intellectualization stage of awareness development includes recognition of the issue as a function of what happens to others. The parent in intellectualization thinks, "I've brought my kids up right. I know nobody in *this* family is going to use drugs. The people down the street, on the other hand, let their kids run wild. It's no wonder they've turned out the way they have." Frequently, individuals in intellectualization rationalize the occurrence of an issue as warranted. The individual intellectualizing about sexual harassment or assault thinks, "She was wearing a

short, tight skirt. What did she expect?" After reading the newspaper article about the woman being raped, the man in intellectualization wonders why the woman was stupid enough to go out at a late hour by herself, then turns to thinking about the neighborhood property values going down because of the increase in crime.

Bronfenbrenner's (1979) work on the effect of social and cultural factors on adult development suggests that those closest to the individual are going to have the most impact. The role of context literally forms you. Schon (1987) further suggests that the situation frames the learning. In a situation that does not present, focus on, or involve the individual with the issue, their stage of awareness development would be pre-encounter. Cognitive development starts as the situation begins reflecting the issue. In the cycle of adult awareness development, as the individual's situation reflects the issue, the individual moves from pre-encounter into intellectualization.

Argyris' (1982) description of single loop learning focuses on cognitive development using existing routines and mental models, causing self-reinforcing patterns rather than developing new solutions. The individual in intellectualization spends a great deal of time on mental gymnastics, repeating a pattern of single loop learning. Miller (1980) suggests that intellectualizing is a "blunting" strategy, enabling an individual to avoid cognition of an unacceptable event. In the intellectualization stage of adult awareness development, the individual is not avoiding cognition. Rather, they are enjoying the intellectual discourse on an issue that does not really affect them.

The intellectualization stage of awareness is emblematic of Sternberg's (1985) definition of the mechanics of intelligence, where intelligence focuses on conceptual and theoretical (i.e., school book intelligence) as opposed to competence for everyday living. The intellectualization stage of adult awareness development is a hypothetical world where the issue remains at a distance and can be addressed in concepts and generalities, rather than a concrete world where the issue is a reality.

Encounter

Encounter, the third stage of awareness development, begins when the individual has the primary experience with the issue. This may be a "big zap." The man who worried about property values declining moved into encounter in a rush when his wife was forced to go out at night to get milk for their colic baby and was raped in the poorly lighted store parking lot. The spouse coming home after yet another extended business trip quickly entered encounter upon finding that her husband had filed divorce papers. The homeopathic, naturalistic, non-smoker found herself in encounter when she was diagnosed with lung cancer in a routine physical.

An individual might slide into encounter after an extended, low-level exposure to the issue. One woman, the first female engineer in the organization for which she worked, suggested, "It's not the big things in life that get you down. It's the constant barrage of little things that erode your confidence and make you wonder if it's all worth it." Pearlin, Lieberman, Menaghan, and Mullan (1981) stipulate:

> "Hardships that are an enduring testimony to one's lack of success or to the inadequacy of one's efforts to avoid problems would seem to pose the most sustained affront to one's conceptions of self-worth and of being in control over personal destiny....It is the abiding problems to which people can see no end, those that seem to become fixtures of their existence, that are intrinsically uncongenial with positive self-concept" (p. 346).

Experience with the issue generates two phases in the encounter stage of awareness development. Initially, behavior focuses on *implosion* (i.e., "Why me?!") due to the shattering of the perception of invulnerability created during the intellectualization stage. This stage of awareness development may include self-doubt (i.e., "What's wrong with me?!") and foster a sense of self-blame (i.e., "I must have done something to bring this upon myself."). The second phase of the encounter stage of awareness development is *explosion*, giving encounter the subtitle of rage stage. The individual feels, "I'm mad as hell and I'm not going to take it anymore," yet the individual also has the perception of lack of control and a sense of powerlessness to do anything about the issue.

Building on the precepts of social learning theory, Rotter (1966) provided grounded theory on the locus of control construct in a discussion of generalized expectancies for internal versus external control of reinforcement. Rotter conceptualized locus of control as a predisposition in the perception of what causes reinforcement (i.e., reward, favorable outcome, goal accomplishment). A predisposition for internal locus of control (i.e., internality) results from perception that reinforcement is contingent on one's own behavior or one's own relatively permanent characteristics or traits. Perception that reinforcement is due to luck, chance, fate, or factors beyond one's control indicate an external locus of control (i.e., externality). Individuals experiencing the encounter stage of the cycle of awareness development perceive a shift in locus of control toward externality.

A slightly different perspective on the concept of internal versus external control of reinforcement was provided by Lefcourt (1976). "In being forced to hear predictable noise we may stop work and wait until it ceases, or steel ourselves for the onset, minimizing our own responses to the noise. We are not as helpless as we might otherwise be since we can do something to minimize the impact of the predictable noise. It is this perception of the ability 'to do something' that gives rise to the concept of perceived control" (p. 5). Perceived control is a generalized expectancy for internal control of reinforcement. Reactions to unpleasant stimuli are shaped by the individual's perceptions of the stimuli and by the individual's perceptions of ability to cope with the stimuli. Individuals in encounter have diminished coping ability.

Encounter occurs when an individual perceives their social power has been threatened, eroded, or taken away. Gurin and Brim (1984) suggest the need for control is basic to self and describe research showing depressed individuals as hyper-realistic about their lack of personal efficacy. Personal efficacy means "judging the self as capable, as a person able to produce acts that should lead to desirable outcomes" (p. 283). Rotter's (1954) study on locus of control The husband in encounter wanted to turn back time and feared he was going to lose control and kill someone, yet he perceived there was absolutely nothing he could do about his feelings. The female engineer felt there was nothing she could do to change the situation—feeling certain that everything always had been and always would be controlled by an old-boys-network.

The individual may experience the issue firsthand or the individual may "live" the issue through the experience of others. The female engineer directly encountered gender inequity and harassment. On the other hand, the husband was not raped but entered the encounter stage of awareness development around the issue of rape due to his wife's experience. The older gentleman who intellectualized that sexual harassment did not affect him entered encounter when, over the dinner table, his daughter tells him about sexual harassment she experienced at work.

The individual in encounter has total and extended immersion in the issues, resulting in intense personal involvement. Being in encounter does not mean having a bad day or week, but having a bad life. Depression may be symptomatic of the implosion phase of encounter. The female engineer suggested she had been in encounter for at least nine years. The husband suggested it was nearly a year before he was able to move beyond the rage stage of awareness development and reconcile his anger. The total immersion in the issue creates a blindness that inhibits further progression in the cycle of awareness development. This immersion often leads to erroneous assumptions and paranoia. Everyone else's motives are seen as maligned. The white male who intellectualized that he would advance in his job if he did the right things does not get the promotions he expected and finds no headroom. He attributes this to women and minorities getting promoted because of "unfair quota programs" rather than the flattening of the corporate structure or his own deficient work output.

Erikson (1950) suggests that individuals having a psychosocial crisis in one stage of development must resolve the crisis. If the individual is unable to resolve the crisis, the individual is destined to repeat the crisis in later life stages. The individual revisits the crisis issue again and again until they are effectively able to resolve it. The encounter stage of adult awareness development is emblematic of this recurring crisis.

Ironically, individuals in rage stage may begin to find comfort in the encounter stage of awareness development. The individual sees himself or herself as having a difficult or bad life and, consciously or unconsciously, pulls others into their world. It is no surprise that being around the individual in rage stage is difficult. Attempting to help the individual in rage stage is described as, "like trying to hug a porcupine." The individual in encounter takes family, friends, and colleagues "from east hell to west hell and back" on a daily basis. One individual described a coworker as "carrying a bucket of doom and gloom" everywhere in the workplace. Consciously or unconsciously, others' may avoid the individual. Unfortunately, it is during the encounter stage that the individual needs the support of others the most.

The issue precipitating entry into the encounter stage of awareness development may result from comparison to one's peers. Neugarten and Neugarten (1987) identify social time in relation to one's contemporaries as:

> "a set of anticipations of the normal, expectable life cycle: expectations of what the major life events and turning points will be and when they should occur. People internalize a social clock that tells them if they are on time or not" (p. 33).

Life crises occur when the rhythm and timing of life events is out of sync with one's peers. The disorienting dilemma created by out-of-sync social time is akin to the encounter stage of awareness development.

> "It is the events that upset the expected sequence and rhythm of the life cycle that cause problems—as when the death of a parent comes during one's adolescence rather than in middle age; when marriage is delayed too long; when the birth of a child comes too early; when occupational achievement is slowed;

when the empty nest, grandparenthood, retirement, major illness or widowhood occurs" (Neugarten & Neugarten; p. 33).

In studying the attitudes of individuals confronted with terminal illness, Kubler-Ross (1969) identifies five stages: denial and isolation, anger, bargaining, depression, and acceptance. The encounter stage of awareness development is a reflection of the first four of these stages. Isolation and depression closely align with the implosion phase of encounter, while anger corresponds to the explosion phase. Acceptance relates to moving out of encounter to the next stage in the cycle of awareness development.

Empowerment

The fourth stage of awareness development is *empowerment*. This stage includes seeking and finding strategies for securing enough power to make necessary changes while managing risk to self and others. Empowerment requires reflection, where negative judgment is suspended. The individual begins to use their discretion in a more rational manner. The empowerment stage encompasses a resurgence in the individual's perception of personal and position power. During empowerment, the feelings of powerlessness and loss of control generated during the encounter stage are reconciled. Personal efficacy is regained during the empowerment stage. Individuals begin to recognize the extent of power they have within their span of control and, even if that power is limited, use that power to regain a sense of control.

A significant part of empowerment comes from enlisting the aid of others through the development and maintenance of support systems (e.g., mentors, confidants, networks). The feedback learning loop support systems provide fulfills the need for coaching the individual in the empowerment stage of awareness development. Feedback as a strategy for empowerment requires a discourse or dialogue. This serves as the making-meaning piece—for enabling the individual to move beyond the frustration, anger, and misperception of encounter. Mezirow (1985) suggests this tends to be done socially. Gurin and Brim (1984) identify "attention and processing of social information as the first step in change" (p. 312). Kram (1988) also notes the importance of workplace social systems for supporting individual development and reconnecting an individual experiencing the isolation of encounter.

Participants in a diversity training initiative suggested several strategies for moving through the empowerment stage of awareness development around the issues attendant to diversity in the workplace (Kormanik & Geffner, 1995). Strategies included working the problem out internally, getting outside help, putting the problem on hold, and taking training. The strategies shed light on how individuals might provide assistance to, or seek assistance from others, to enable them to get beyond the rage stage of encounter. The data reinforce individual responsibility and accountability for moving out of encounter, through empowerment, to the next stage of awareness development.

Integration

Integration, the fifth stage of awareness development, is the state of "being whole"—synergy, synthesis. The individual regains a sense of control. The effects of the issue that precipitated encounter dissipate easily. The female engineer stating, "Like rain off a duck's back, I don't let the pettiness bother me anymore." The individual knows *what* they do and *why* they do it as a result of the cognitive and psychosocial development during the empowerment stage. The individual who went through a divorce suggested that if the encounter stage of awareness development was "when you are pissed," then the integration stage was "when you get creatively pissed"—functionally rather than dysfunctionally. The individual is capable of helping himself or herself, as well as others, be effective and successful in their efforts. This may occur in both professional and personal endeavors.

Anthropologists suggest that "with evolution, the self becomes more distinct and it also assumes more responsibility for its own deeds" (Peacock & Kirsch, 1970, p. 288). The individual moves toward rationality in order to better manage irrational drives. The progression through empowerment to the integration stage of awareness development represents regaining control of the irrationality created during the encounter stage.

The cognitive and psychosocial development represented by moving through the empowerment stage into integration represents the growth piece. As the individual moves through empowerment to integration, the individual finds new and more effective ways to resolve or at least cope with the issue that precipitated encounter. In integration there is practical application of strategies for moving beyond the crisis of encounter. Sternberg (1985) defines pragmatic intelligence that emphasizes experience and real-world context where problem solving in everyday life occurs naturally. The development through empowerment to integration is similar to the double loop

learning suggested by Argyris (1982). In Levinson's (1978) terms, moving to the integration stage represents becoming your own man or woman. The integration stage correlates to the Jungian (1983) concept of individuation, as well as the concept of individual time identified by Neugarten (1979). Schon (1987) describes perspective transformation as a fundamental change in the way the individual views the world, revolution rather than evolution. Movement through the cycle of development to the stage of integration around a particular issue embodies the concept of perspective transformation.

Movement to the integration stage in the cycle of awareness development does not mean the individual's psychosocial and cognitive development are complete. Perry's (1981) work on cognitive development shows higher level thinking in later developmental stages, where the individual understands:

> "This is how life will be. I must be wholehearted while tentative, fight for my values, yet respect others, believe my deepest values right yet be ready to learn. I see that I shall be retracing this whole journey over and over—but, I hope, more wisely" (p. 79).

The process of awareness development is not static. It is a dynamic, repeating cycle. The individual will remain at integration only until the next issue comes along. The individual may have already reentered the cycle of awareness development around another life event or issue. Let us hope more wisely.

Conclusions

Individuals go through a cycle of awareness development around life events, transitions, and other issues. The cycle includes five stages: pre-encounter, intellectualization, encounter, empowerment, and integration. The various stages of the cycle embody cognitive, psychological, and social development. The cycle repeats for each life event, transition, and other issue. Individuals generally progress through the stages of awareness in sequence, but progression varies significantly. Depending on the specific issue, some individuals may progress rapidly and some might stagnate at an early stage.

Contribution to New HRD Knowledge

Glaser and Strauss (1967) suggest that the discovery of grounded theory from social research data is of particular importance when it provides "relevant predictions, explanations, interpretations and applications" (p. 1). The cycle of awareness development theory enhances understanding of why some individuals are more sensitive than others to the issue at hand. The theory provides a useful framework that helps both practitioners and laypeople predict, explain, and interpret an individual's attitudes and behaviors based on the individual's stage of awareness development. There are several implications for HRD.

While this paper focused on awareness development at the individual level, application to the organization is appropriate. For example, the work group that goes into encounter when there is a critical incident of violence in the workplace, or the work force that goes into encounter after. The HRD practitioner can develop programs for increasing awareness about workplace violence to move people out of pre-encounter and assist in proactive intellectualization. Critical incident teams can be set up to assist employees in encounter. A plan can be put in place with strategies for moving employees out of encounter, through empowerment, to integration.

Other events that could precipitate individuals and organizations moving through the cycle of awareness development include: a clash in corporate cultures after an organizational merger, a new boss or change in organizational leadership, a series of reorganizations and downsizing, or the stress of dealing with constant organizational change. HRD practitioners must be ready to assist employees and management move through the cycle, while recognizing that some employees will need additional help in moving beyond encounter.

Training and development programs are another area for application of the cycle of awareness development. Diversity training programs, for instance, should focus on moving employees out of pre-encounter with diversity issues to enhance understanding of what coworkers might be going through as a result of their diversity. HRD practitioners must recognize that confrontational diversity training forces people into encounter. While this training methodology may be appropriate, the training design must also move the employees beyond encounter, through empowerment, to integration via skills building and development of organizational support systems.

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Personality Traits, Affect, and Values: A Model of Dispositional Effects On Motivation to Learn

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HRD research has largely ignored non-situational influences on outcomes. One particularly promising area of individual difference research is the dispositional perspective. This paper reviews the literature on potential dispositional effects in HRD and proposes a model of dispositional effects on motivation to learn.

Keywords: Personality Traits, Affect, Values, Motivation to Learn

In order to develop and implement effective training program, various aspects of the learning situation must be carefully and thoroughly considered. Examples of these aspects requiring attention include: the developmental goals and objectives; the individual and situational differences; and, the core principles of adult learning (Knowles, Holton, and Swanson, 1998). Facilitators must fully understand and appreciate the complexities of: the nature of the intended outcomes; the training activities and experiences that can lead to these outcomes; internal and external influences that potentially affect these outcomes; and the ways learners vary as individuals and in groups (Tomlinson, et al., 1992).

To date, much of the related research has largely ignored non-situational components. That is, much less emphasis has been focused on the way learners vary as individuals. Because these individual differences may affect key outcomes and are virtually ignored, this is a potentially crucial oversight. Variations among individuals, specifically variance in dispositional characteristics, and its relationship to HRD outcomes such as motivation to learn must be considered. Such a comprehension will aid in recognizing and employing strategies and methodologies that fit the learners, the desired outcomes, and the learning context.

This paper serves to introduce dispositional effects into HRD and proposes one specific application, motivation to learn. More specifically, this paper will review the literature on dispositional domains of traits, affect and values, and propose defend a model of dispositional effects on one HRD construct, motivation to learn.

Dispositional Approach Defined

Industrial, organizational, and psychological researchers have a long history of interest in individual differences and dispositional characteristics. Applications of related investigations are found in assessment activities, vocational counseling, and personnel selection procedures (Murphy, 1996). Murphy identifies four separate individual difference domains: cognitive ability, personality, orientation (values, interests, etc), and affective disposition (i.e., mood, affect, and temperament). These areas do not exhaust the set of individual differences that might substantially influence job performance or other organizationally relevant criteria (i.e., physical or psychomotor differences might be important in certain situations), but they do represent the most frequent concerns of related theory and research (Murphy, 1996). As Murphy (1996) indicated, individual differences influence behavior in organizations; however, their influence extends past behavior to organizational outcomes. They can affect long-term performance improvement or a permanent decline in productivity, increased personal growth or intellectual stagnation.

These individual differences have given rise to a stream of research known as the dispositional approach, which has been the focus of much empirical research in recent years. While other organizational research perspectives focus on situational and interactional perspectives (an interaction between the situation and the individual), this approach primarily focuses on the individual. Dispositional theorists posit that individuals possess certain characteristics that are enduring – consistent across situations and over time. Thus, dispositional effects are a subset of the individual differences domain which refers to all aspects of individual differences, not just those that are enduring. These relatively stable individual characteristics affect an individual's attitudes and behavior (Davis-Blake & Pfeffer, 1989), or cause an individual to perceive different contexts in consistent ways (Schaubroek et al.,

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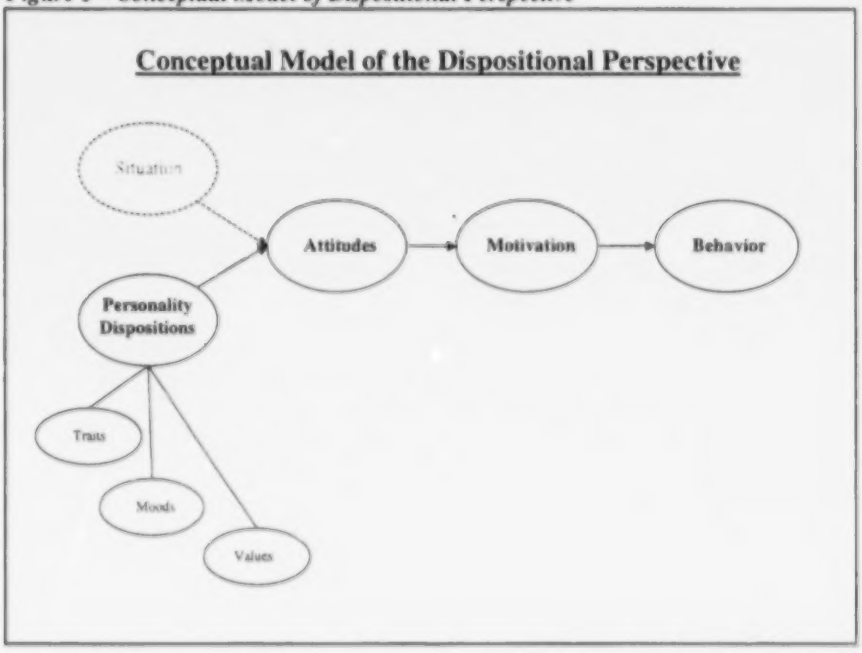
1996).

Dispositional characteristics include three major domains: personality traits, affect, and values. By measuring these personal characteristics, individual attitudes and behaviors can be more accurately explained (Staw & Ross, 1985). Figure 1 below illustrates the conceptual framework for understanding the dispositional perspective. As shown, situational and dispositional factors (traits, affect, values) interact to influence attitudes, which in turn influence motivation, and finally behavior.

Figure 1 – Conceptual Model of Dispositional Perspective



Among the empirical studies focused on the dispositional approach to job attitudes and behaviors are studies of its effect on job performance (Barrick & Mount, 1991), and examinations of test-retest correlations of job attitudes (Staw & Ross, 1985). Research suggests that there are dispositional underpinnings of work values, attitudes and moods (c.f., Arvey, et al., 1989; George, 1989; Staw, Bell, & Clausen, 1986). Because each of the three aspects of the work experience is affected by an individual's dispositional traits, these dispositional foundations suggest that there is an element of stability associated with job attitudes and behavior (George & Jones, 1997, Staw & Ross, 1985). The relationship between dispositional factors and work-related strain has also been investigated (Brief, et al., 1988; McCrae & Costa, 1991). And, George (1989) has investigated the relationship between dispositional affectivity and employee absences. Further supporting evidence will be discussed in the next sections.

Personality: The Five-Factor or Big Five Taxonomy

The Five-Factor Model (FFM) dominates the current view of personality and provides a unifying structure to its study. This model has, in fact, garnered so much support, that the FFM "has now become an almost universal template for understanding the structure of personality" (Ferguson & Patterson, 1998, p. 789). As the name implies, this model suggests that there are five broad categories of traits at the top of the personality trait hierarchy. The relatively orthogonal five-factor taxonomy resulted from decades of research on the structure of human personality (Costa & McCrae, 1992), and has gained the support of numerous researchers (e.g., Costa & McCrae, 1995a; Digman, 1990; Goldberg, 1990). As highlighted by Costa and McCrae (1992), the five dimensions of the Five Factor model of personality are: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and

Conscientiousness.

Barrick and Mount's (1991) meta-analytic study showed that personality validly predicted training proficiency across all occupational groups studied, with correlations ranging from r = .26 for Extroversion, r = .25 for Openness to Experience, r = .23 for Conscientiousness, r = .10 for Agreeableness, and r = .07 for Emotional Stability. They attributed the relationship between Extraversion and training to the fact that many training programs are highly interactive and require a considerable energy level among participants – characteristics that are highly compatible with traits associated with Extroverts.

There is some evidence of consistent correlations between Conscientiousness scores and educational achievement (Barrick & Mount, 1991). These researchers asserted that Conscientiousness is the most consistent predictor of academic achievement and job performance among the personality traits (Mount & Barrick, 1995). A possible explanation for this finding relates to an individual's attitude upon entering a training program (Barrick & Mount, 1991). Individuals who rate high on the Conscientiousness factor, because of attributes such as intelligence, curiosity, and broad-mindedness, are more likely to have positive attitudes toward learning experiences in general (Barrick & Mount, 1991). Ryman and Biersner (1975) found a link between individuals' attitudes prior to participation in a training program and graduation from a Navy School for divers; and Sanders and Vanouzas (1983) revealed that attitudes and trainee expectations influence the likelihood of positive training outcomes (Barrick & Mount, 1991). Salgado (1997) found that Agreeableness and Openness were predictors for training criterion (r = .31 and r = .26, respectively).

Affect: Positive and Negative Affectivity

Watson and Clark (1984) conducted extensive reviews of research studies in personality and subjective emotional experience, and theorized that the tendency to experience positive or negative affect represents a stable dispositional trait. They discovered consistently high inter-correlations between measures of negative emotions such as anxiety, irritability, neuroticism, and self-deprecation (Levin & Stokes, 1989). They asserted that the various scales, though diverse, were measuring components of a more global trait – negative affectivity. Subsequently, the concepts of positive affectivity (PA) and negative affectivity (NA) have been widely researched with respect to work-related behaviors and attitudes (c.f., George & Brief, 1992; Watson, Clark, & Tellegen, 1988). Researchers have concluded that neuroticism tends to be more strongly associated with NA and extraversion tends to be more strongly associated with PA (McFatter, 1994).

Negative affectivity (NA) is fundamentally an emotion-based trait dimension (Watson & Clark & Tellegen, 1988). Individuals with higher levels of NA tend to focus more on negative aspects of themselves, others, and the world in general. Individuals with higher levels of positive affectivity exhibit a more positive focus. High levels of NA are related to a type of cognitive bias or a lens through which individuals approach and understand their life experiences, which may affect how people experience and evaluate their jobs (Levin & Stokes, 1989).

Individuals with high levels of PA typically demonstrate a general enthusiasm for life and are often described as energetic, joyous, eager, sociable, zestful, and exhilarated. Tellegen (1985) characterized individuals high on the PA dimension as having a general sense of interpersonal relation and achievement (George & Brief, 1992). Low PA scorers are often considered to be apathetic and indifferent. They do not see themselves as pleasurably engaged, have a weak overall sense of well-being, and do not consider themselves to be self-efficious (Tellegen, 1985). PA has also been found to influence an individual's responsiveness to incentives (Gouaux & Gouaux, 1971), heighten the level of generosity extended to others (Isen & Levin, 1972), and enhance learning speed (Masters, Barden & Ford, 1979). Wright and Mischel (1982) found that positive affectivity also results in heightened expectations, greater estimates of past successes, and more favorable self-assessments.

Work Ethic and Values

Researchers have amassed considerable evidence to suggest that values influence work-related decisions (Dawis & Lofquist, 1984; Judge & Bretz 1992; Ravlin & Meglino, 1987). Values relating to work have been defined as work values, occupational values, and career values (Pine & Innis, 1987). Employers frequently mention work ethic, also termed Protestant Work Ethic (PWE), as a desirable work value of employees. Coupled with employability skills, work ethic is often cited as an attribute that is desirable or necessary for employment success (Custer & Claiborne, 1991; Hill, 1992). Work ethic is a multi-dimensional construct that has social, economic, and political implications (Furnham, 1990a), and because work ethic is an abstract concept, there exists a multitude of both definitions and

measurement techniques. It is important to discuss several of these definitions as each adds an important dimension to the construct and helps clarify its significance. Greenberg (1977), for instance, identified work ethic as a personality construct, and Morrow (1983) defined the term as the extent to which one intrinsically values work as an end in and of itself. Other researchers extend their conceptualizations of the work ethic past the notion of intrinsic value and introduced personal accountability and responsibility for the work that an individual performs into the definition of work ethic (Cherrington, 1980;Yankelovich & Immerwahr, 1984). The concept of work ethic has also been defined for "an individual (or for a more or less homogeneous group of individuals) as a value or belief (or a set of values or beliefs) concerning the place of work in one's life that either (a) serves as a conscious guide to conduct or (b) is simply implied in manifested attitudes and behavior" (Siegel, 1983, p. 28). This definition is an important one because it applies to a wide variety of groups; it is culture-free; and neutral to a historical context, to location, to non-work interests.

The most fundamental argument supporting the dispositional nature of work ethic focuses on the fact that work ethic is considered a value. The stability of values (i.e., values are enduring beliefs) and the fact that values are generally "not specifically linked to situations" (Furnham, 1990, p. 35), supports the dispositional underpinnings of values. The dispositional nature of work ethic is also evident in Morrow's (1993) conceptual model of work commitment that uses concentric circles to depict a multifaceted approach to defining and measuring the construct. As Blau (1997) wrote, Morrow indicated that work ethic was the innermost circle, followed by career commitment, continuance then affective organizational commitment, and job involvement as the outermost circle. Furthermore, she says that work ethic is linked to personality because of evidence that it covaries with other stable personality traits such as locus of control and authoritarianism (Morrow, 1983).

Furnham and Koritsas (1990) stated that much of the research efforts relating to work ethic have been focused on devising psychometrically assessed measures of the PWE, examining the relationship between PWE beliefs and other work and non-work behavior, and investigating the relationship between the PWE beliefs and other individual difference measures of personality, values and social attitudes (Furnham, 1982). Merrens and Garrett (1975) predicted and found that individuals with high PWE scores performed better and longer on tasks designed to provide low motivation and interest levels. Greenberg (1977) found that negative performance evaluations resulted in performance improvement among individuals with high PWE scores and a decrease in performance levels among individuals with low PWE scores.

Dispositional Effects on Motivation to Learn

Because dispositional effects have not been prevalent in HRD research, there is no theory to draw upon in order to construct a model of dispositional effects on motivation to learn. There are however multiple studies that suggest such a model is appropriate and worth testing. This section reviews those studies.

Personality While the direct relationship between personality variables and training proficiency has not been extensively studied, the findings of Barrick and Mount (1991) are particularly meaningful. Using the Big Five taxonomy, they found that training proficiency could be predicted for individuals falling within the following personality dimensions -- Conscientiousness, Extraversion and Openness to Experience. Colquitt and Simmering (1998) investigated the relationship between personality variables and motivation to learn, and found a positive relationship between motivation to learn and Conscientiousness with learning after orientation, both initially and after performance feedback was given. "Personality variables explained an incremental 28% of the variance in prefeedback motivation to learn ($p < .001$), with both conscientiousness ($r = .33$, $p < .001$) and learning orientation ($r = .38$, $p < .001$) having significant independent relationships. Personality variables explained an incremental 27% of the variance in postfeedback motivation to learn ($p < .001$), again with both conscientiousness ($r = .28$, $p < .001$) and learning orientation ($r = .40$, $p < .001$) having significant independent relationships" (1998, p. 661)."

Affect George and Brief (1992) argued that affective characteristics can serve as information that guides and directs an individual's motivational attention. They also argued that affective characteristics impact the nature of motivation. They cite Clark (1982) and Morris and Reilly (1987) as support for this contention. The pervasiveness and nonspecific nature of moods are part of the reason that moods appear to have such extensive effects on cognitions and development (Morris & Reilly, 1987).

George and Brief (1996) have recently proposed a model of work motivation in which moods - particularly positive moods - play a pivotal role. In their model, positive moods are proposed to influence distal motivation (for example, choice of behaviors or effort levels) by causing workers to have higher expectancies, instrumentalities, and valence due to the effects that positive moods are likely to have on the cognitive processes underlying these judgements.. Positive moods are also proposed to influence proximal motivation (for example, ongoing behavior when actually engaged on a task) by causing workers to maintain higher standards for themselves. While negative

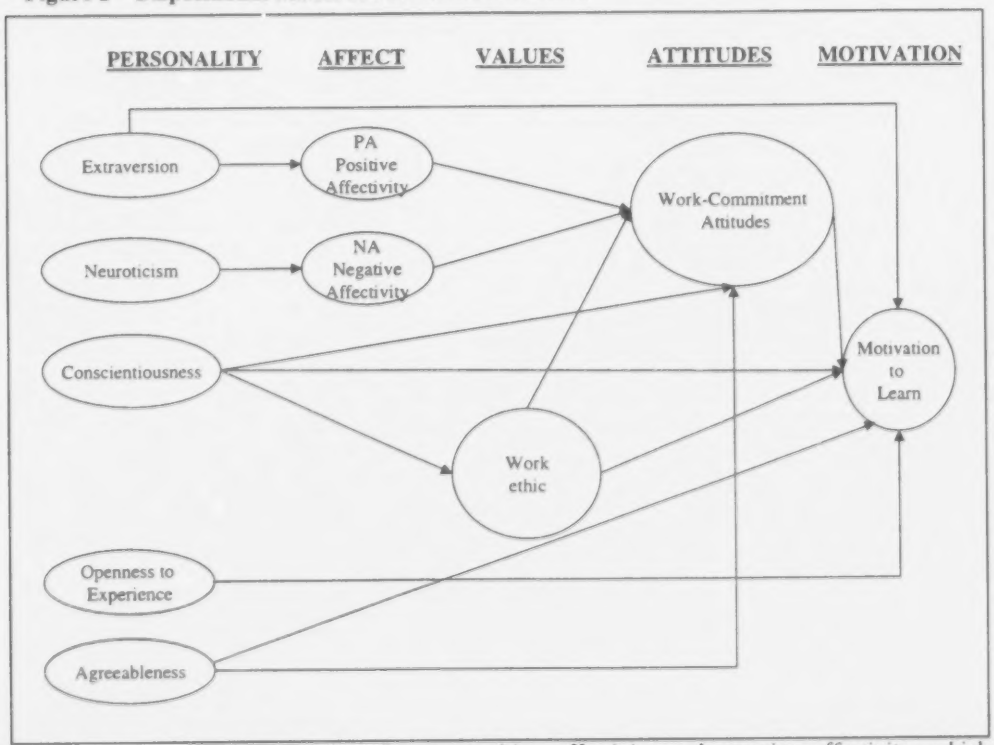
moods are also likely to influence work motivation, their potential effects are more difficult to tease out (George, 1996).

Values The antecedents and consequences of values have been extensively studied and work ethic is one of the most widely examined work values. Its effect on both work commitment attitudes and achievement (a motivational component) has been well documented. Such studies include: 1)Values influence job satisfaction, organizational commitment, and job involvement (Lei & Mowday, 1987); 2) Individuals with high PWE scores performed better and longer on tasks designed to provide low motivation and interest levels (Merrens & Garrett, 1975); 3) Work ethic is related to achievement (Murray, 1938; Furnham, 1990); 4) Work values are more associated with organizational commitment than instrumental values (Putti et al., 1989); 5) Organizational commitment is positively related to cognitive work value items (Koslwosky & Elizur, 1990); and, 6)Researchers have found a potential relationship between PWE and job involvement (c.f., Brief & Aldag, 1977; Mayer & Schoorman, 1998; Rabinowitz & Hall, 1977).

Attitudes Because dispositional variables have been found to be related to attitudes, and attitudes are related to motivation, it is logical to hypothesize that attitudes serve as a mediator to motivation to learn. In fact, Noe established a link between job attitudes and motivation to train (1986). He suggested that training programs are "more salient to individuals who are highly involved with their jobs" (1986, p. 739). Participation in job-related training programs could increase skill levels, improve job performance, and increase an individual's sense of self-worth (Noe & Schmitt, 1986). These are outcomes that are valued by highly involved, conscientious employees. Facteau et al. (1995) and Tannebaum et al. (1991) examined the association between commitment and motivation to train, and Facteau et al. (1995) studied the extent to which trainees' attitudes and beliefs influenced their pretraining motivation. Their findings indicated that individuals who were committed to the values and goals of the organization had higher levels of pretraining motivation. In a study conducted at a U.S. Naval Recruit Training facility, they found a high correlation (r = .53) between commitment and motivation to learn.

Proposed Model Research about dispositional effects on learning and motivation to learn is clearly in its infancy so any proposed model must be considered exploratory at this stage. The model shown in Figure 2 hypothesizes the following relationships, based on available research and theory.

Figure 2 – Dispositional Model of Motivation to Learn



1. Extraversion and Neuroticism will influence positive affectivity and negative affectivity, which in turn

influence work attitudes, which then influences motivation to learn
2. Extraversion will also have a direct effect on motivation to learn.
3. Work Ethic will have a direct effect on motivation to learn, and an indirect effect through its influence on work attitudes.
4. Conscientiousness will influence motivation to learn in three ways: through its influence on work attitudes; through its influence on work ethic; and a direct effect.
5. Openness to experience will directly affect motivation to learn.
6. Agreeableness will directly affect both work attitudes and motivation to learn.

Consistent with the conceptual model shown earlier, Figure 2 shows that work attitudes are a key mediator for some dispositional effects. Two key work attitudes, job involvement and organizational commitment, are expected to exert the most influence on motivation to learn. It is important to note that this model does not capture all influences on motivation to learn, which would include situational effects. Rather, it hypothesizes what are believed to be the key dispositional influences on motivation to learn.

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Pre-Job Training and the Earnings of High-Tech Employees in Taiwan

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The principal aim of this paper is to measure the impact of pre-job training programs on the subsequent earnings of trainees, with special attention given to engineers employed by high-tech firms in Taiwan. With the effects of educational attainment, age, and seniority controlled for, this study concludes that public training programs have no impact on the earnings of participants in later jobs. However, it finds that participation in private training programs does have a significantly positive effect on post-job earnings. A comparison between this study and others is made, and implications are briefly discussed.

Keywords: Pre-Job Training, Earnings, Taiwan

It is commonly believed that education and job training have a profound impact on worker productivity and the quality of work produced, and that both must be strengthened in order to improve the economic status of workers and their firms' competitive positions in the global marketplace. Moreover, with external pressures generated by the expansion of international trade and technological change showing no sign of abating, education and training are expected to play an even more critical role in raising productivity and improving living standards in the future.

Vocational training and its impact on earnings have increasingly attracted the attention of policy makers in recent years, with governments citing public and private training as a key element in developing the type of skilled work force necessary for economic growth in the 21st century. Despite this heightened concern with training, however, surprisingly little empirical work has been done to measure the actual impact of training programs on worker earnings. This leads us to raise such questions as: How does training affect worker earnings? Are there certain forms of training that are more successful in boosting productivity and income than others? And do the effects of training received on one job carry over to performance and compensation in other jobs? To our understanding, full and explicit answers to questions such as these have not yet been provided.

Previous studies on the effects of training generally fall into two broad categories. The first type investigates the effects of public vocational training programs on the employment and income of disadvantaged groups. As one example, Dolton (1993), studying the experience of the British Youth Training Scheme (YTS) in the United Kingdom, concluded that this program had a negligible effect on wages and a possibly negative impact on employment. Meanwhile, Green, Hoskins, and Montgomery found that not only did YTS fail to raise the wages of trainees but that it actually lowered them relative to those who had not received such training. Their conclusion: It is better to stay in school than to participate in YTS.

On the other hand, Mains (1991) shows that participation in YTS results in a quantitatively and statistically significant improvement in the probability of being employed. Similarly, Whitfield and Bourlakes (1991) conclude that YTS has helped school-leavers to obtain full-time employment and to improve their positions in the labor market. However, the results of their wage analysis suggest that YTS participants earned slightly less, *ceteris paribus*, than non-participants.

In the United States, Friedlander, Greenberg, and Robins (1997) found that government programs for the disadvantaged have had modest effects on employment and earnings for adult men and women. Jantzen (1987), using survey data to analyze the short-term impact of classroom training under the Comprehensive Employment and Training Act (CETA) in Boston, shows that Boston's programs have produced large increases in earnings for both male and female trainees. However, this finding is not consistent with those of other studies. For example, Dickinson, Johnson, and West (1986), using data from the 1976 Continuous Longitudinal Manpower Survey, found that CETA participation exerted a significant negative impact on the post-program earnings of males, and an insignificant positive impact on the post-program earnings of females.

The previous studies suggest that, on the whole, the outcomes of public training schemes have often fallen short of expectations. The fact that most of the trainees participating in such programs tend to come from disadvantaged social groups leads us to question whether such studies suffered from a self-selection bias. In other words, if participants had come from more randomly distributed backgrounds, would the outcomes have been different? Or, since bureaucracy and inflexibility seem to be commonly criticized features of public institutions, have deficiencies been built into the programs themselves? And if this is the case, would privately managed programs produce more

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successful results for trainees?

The second major category of research has focused on the effects of on-the-job-training (OJT) on trainee earnings. As one example, Bartel (1995), using a unique set of data collected from the personnel records of a large company, found that OJT had had a positive and significant impact on both wage growth and job performance scores, thereby confirming the robustness of the relationship between training and productivity. Groot and Mekkelholt (1995) concluded that workers who receive OJT have lower initial wages than those who do not, but that their wages grow more rapidly in the future. In addition, the marginal rate of return on OJT is high and increases with level of education. Vijerberg (1993), investigating returns to human capital in Cote d'Ivoire, found that technical training had generated handsome returns in the form of higher wages.

The only exception to the findings presented above is a study conducted by Hotchkiss (1993), who evaluated the relationship between training and occupation on the one hand and wages on the other, using data from a cohort of highschool graduates. Hotchkiss found a strong and positive relationship to exist between training and wages. However, when type of occupation was included in the analysis, the wage effects were almost entirely diluted, implying that occupational category, and not training, explained the increase in wages.

In spite of Hotchkiss's contrary finding it is reasonable to expect that training, provided as a premium to raise productivity and reduce turnover, will have some effect on a worker's wage. However, the benefit may be limited to only the current job and may not carry over into future employment with other firms. Only a few studies address the question of whether the effects of training are portable across jobs. One by Booth (1993) finds that female workers who receive training for one job substantially increase their wages in subsequent jobs within the same firm. For males, training received during the last job was seen to have little effect on wages from the current job, although training in earlier job assignments had a more significant impact.

A study conducted by Lynch (1992) shows that OJT received before the current job has no impact on current earnings, but that off-the-job training before current employment has a significant and positive impact. The reason for this may be that OJT is too firm-specific to benefit subsequent employers, who therefore are unwilling to pay workers extra for such training. On the other hand, off-the-job training may be sufficiently generic to make wage effects portable. If that is the case, pre-job training may be expected to have a significant effect on trainee wages.

Instead of examining the earnings effect of training provided by previous employers, this study seeks to determine whether pre-job training (obtained from either public or private training organizations) enhances the growth of trainee earnings. In order to avoid the problem of self-selection (i.e., to exclude members of socially disadvantaged groups), a group of engineers randomly selected from high-tech firms were chosen as the research subjects. Section II of the paper describes the model to be estimated and provides further information about the data source. A discussion of the findings is presented in section III. Some conclusions are drawn in the final section.

Methodology

The following functional relationship was applied to evaluate the effects of pre-job training on trainee earnings:

$$Y = f(AGE, EDU, GENDER, SENIORITY, PRITRA, GOVTRA, IC, COM, LSIZE),$$

where Y, the dependent variable, represents the monthly salary of trainees.

Most studies (Booth, 1991 and 1993; Groot and Mekkelholt, 1995; Lynch, 1992) use logarithmic values in place of actual earnings. This study employs the original values to estimate the real earnings effect. However, the results of both forms of estimation were double-checked in order to ensure consistency.

Two broad classes of variables affect earnings. The first type, associated with human capital accumulation, is represented by the number of years of formal education completed (EDU), job tenure in years (TENURE), AGE, and GENDER. The second type comprises the log of the firm size (LSIZE) and industrial classification (IC, COM). These are included to represent characteristics of the workplace and to serve as controlling variables.

To test the effects of pre-job training programs, dummy variables were constructed indicating whether the respondent had received any form of training before being hired by the current employer. More specifically, a dummy variable of 1 was assigned if the respondent had participated in a training program provided by a government (GOVTRA) or private organization, and a dummy variable of 0 in the opposite case.

Data for the study were obtained from the *Survey on the Source of High-Tech Employees' Skills* (Lee, Huang, and Jehng, 1998). The respondents were production and R&D engineers employed by integrated circuit (IC), communications, and electronics firms at the Science-based Industrial Park in Hsinchu, Taiwan. Of the 1,448

questionnaires mailed out, 344 were returned. The data were organized into a stratified sample on the basis of industry and firm size. After adjustment for missing values, the data set was found to contain a total of 309 observations.

Table 1 presents the means and standard deviations of the variables. The average age of the respondents was 30 years and average seniority 2.56 years. The major reason for these relatively low values is that the three industries surveyed are newly established in Taiwan. Length of formal schooling averaged 16.44 years. Twenty-five percent of the respondents had graduated from college, with 29 percent holding a bachelor's degree, 43 percent a master's, and 3 percent a Ph.D. Only 14 percent of the engineering staff were female. Respondents earned an average monthly salary of NT$42,942 (US$1,245 at the current exchange rate), slightly higher than the average wage of workers in Taiwan. Nineteen percent of the respondents reported that they had participated in private training programs, while only 8 percent had taken part in public training programs.

Table 1
Means and Standard Deviation for Variables in the Model

Variables	Mean	Standard Deviation
AGE	30.10	4.26
EDU (Formal schooling years)	16.44	1.80
GENDER (Male = 0, Female = 1)	0.141	0.348
PRITRA (No = 0, Yes = 1)	0.193	0.395
GOVTRA (No = 0, Yes = 1)	0.085	0.279
SENIOR (Seniority in the current company)	2.56	2.79
WAGE	NT$ 42,942 (US$ 1,245)	NT$ 14,836 (US$ 430)
FIRM SIZE (Number of employees)	731	865

Results and Discussion

Partial correlation coefficients between the wage level and independent variables, obtained by controlling for industry and firm size, are presented in Table 2. As can be seen, there is a positive relationship between age on the one hand and both public and private training on the other, implying that the greater a worker's age the more likely that he or she has received pre-job training. Though gender and pre-job training are negatively related, the relationship is not significant. Educational attainment and pre-job training are also negatively associated. The implication here is that females and highly educated engineers are somewhat less likely to have received pre-job training than other workers are, though their training experience does not differ significantly from that of less-well-educated males. All of the independent variables except gender are significantly related to the wage level. This shows that females are paid lower salaries than males even though the effects of firm size, industry, and occupation have been controlled.

Table 2
Partial Correlation Coefficient for Key Variables by Controlling for Industry and Firm Size

Variables	AGE WAGE	EDU	GENDER	PRITRA	GOVTRA	SENIORITY
AGE	-					
EDU	.133*	-				
GENDER	-.240**	-.113	-			
PRITRA	.208**	-.104	-.004	-		
GOVTRA	.283**	-.088	-.047	.399**	-	
SENIORITY	.602**	-.333**	-.027	.157*	.184*	-
WAGE	.770**	.303**	-.218**	.263**	.220**	.448** -

*: p<.05 **: p<.01

The regression results for the wage equation, in which the respondent's monthly wage is the dependent variable, are presented in Table 3. Like other researchers (Booth, 1991 and 1993; Groot and Mekkelholt, 1995; Lynch, 1992), I estimated the equations with both logarithms and the actual values of individual wages without obtaining any difference in results. However, since actual wages are easier to understand, I have presented them instead of logarithms in Table 3.

The F-value for the whole model, 52.84, is significant at the $p < .000$ level. This value shows that the model provides a meaningful prediction of individual earnings. Both R^2 and adjusted R^2 are remarkably high, with the model explaining 67 percent of the variation in individual earnings.

Of the organizational features that I included as controlling variables, such as firm size and categories of industry, none had a coefficient showing significant difference from zero. This may be due to the fact that the three industries surveyed (IC, communications, and electronics) all compete for labor in the same market. Therefore, assuming uniform labor quality, those industries may offer compensation packages that are quite similar. At the same time, given that the profitability of high-tech firms is derived from their business strategy and innovative ability and not from their size, it is understandable how the logarithm of firm size could have an insignificant impact on employee wages.

Since the organizational variables did not improve understanding of the determinants of individual earnings, I deleted them and adopted the parsimony model. As shown in Table 3, removing the organizational variables resulted in a negative, though insignificant, relationship between gender and wage. This negative association may be due to the fact that female engineers tend to be younger and less well-educated, and to accumulate less seniority than their male counterparts. After the effects of age, education, and seniority were controlled, the negative impact of gender on wages became negligible.

I am not about to claim that sex discrimination does not exist in Taiwan. In fact, another study (Huang, 1994) found that the earnings of female workers in Taiwan are indeed markedly lower than those of males, even when human capital variables are introduced. The difference between that study and this one may lie in the different natures of the research subjects. Participants in this study, engineers in high-tech firms, were more likely to be compensated on the basis of their knowledge, technical skill, and problem-solving ability than participants in the earlier study, for whom physical strength and manual dexterity were also important concerns. The negligible impact that gender was found to have on wages in this study is an exciting finding because it implies that if we wish to reduce gender-based wage discrimination, increasing female employment in professional and technical occupations may be a good way to do it.

As human capital theory would lead us to expect, educational attainment and seniority were both found to have very strong positive effects on individual earnings in this study. The effect of education on earnings (Beta = .334) was somewhat greater than that of seniority (Beta = .272), with every additional year of education generating NT$

2,711 (US$ 79) more in monthly wages, vs. NT$ 1,400 (US $41) more for each additional year of seniority. This differs from Huang's 1994 study, in which length of service with the current employer was found to have a stronger impact on worker earnings than education. Once again, the difference may be explained by the different categories of workers participating in the two studies. The earlier research focused on workers in general while this study deals with the employees of high-tech firms, where educational attainment is of crucial importance in determining the level of compensation.

As predicted, age was seen to have a strongly positive effect on earnings in this study. With its Beta estimated at .503, the age variable was the most powerful predictor of the individual wage level, and workers were found to earn NT$ 1,696 (US$ 49) more per month on average than other workers only one year younger. Also interesting is that when the square of the age variable was included in the equation, no significant effect was detected. The implication is that there is a linear relationship between wage and age (there was no indication of a curvilinear relationship).

As can be seen in Table 2, both public and private training programs are significantly correlated with wages when the effects of industry and firm size are excluded. However, public training programs (GOVTRA) had a negligible impact on wage in the regression model, regardless of whether the organizational variables were included or not. The reason for this may be that the variable GOVTRA is strongly correlated with AGE and SENIORITY, and when the effects of the last two variables are removed the pseudo relationship between GOVTRA and WAGE disappears. We may therefore conclude that the training programs offered by public institutions in Taiwan do not improve the economic status of trainees later in their careers. Even though the research subjects in this study did not belong to a disadvantaged group, the result is similar to those obtained by Dolton (1993); Green, Hoskins, and Montgomery (1996); and Whitfield and Bourlakes (1991) in England, and that of Dickinson, Johnson, and West (1986) in the United States.

While training provided by government showed little impact on wages, the effect of private training programs (PRITRA) on post-job earnings was significant and positive. The Beta of PRITRA (.128) was considerably greater than that of gender (-.061). And when the effects of years of formal schooling, age, seniority, and gender were controlled, those who had received private training could expect to earn NT$ 4,978 (US$ 144) more each month than those who had not. One implication of this finding is that females can overcome the disadvantage of gender-based wage discrimination by participating in private training programs. And although Booth (1993) concluded that females were less likely to receive such training than otherwise identical males, this study found that male and female workers in Taiwan had equal access to private training programs.

There is a significantly positive relationship between PRITRA and GOVTRA, indicating that private and public training programs have complementary and not mutually exclusive effects. Another implication is that people who participate in pre-job private training programs are also more likely to take part in public training programs. However, the economic returns of private training programs are markedly greater than those of public training programs. One reason for this may be that private programs, whose existence must be justified by their effects on the bottom line, are more oriented toward immediate payback than public programs. For public institutions, which face no direct threat to their survival from rivals, trainee earnings are only one of the factors considered. Indeed, political considerations (such as providing opportunities for minorities, the disadvantaged, and the unemployed) may well take precedence over concerns about wages. In addition, administrative red tape and bureaucratic inflexibility, conditions for which public institutions are commonly noted, also may limit the effectiveness of public training programs.

Previous studies (Booth, 1993; Lynch, 1992) concluded that job training obtained from former employers can be expected to increase trainee earnings in subsequent employment. This study finds that pre-job training provided by private training institutions will help improve the future earnings of participants. One explanation for this is that training provided by private institutions is likely to be generic in nature, and skill and knowledge acquired from such training are easily transferable across jobs. The result is that future employers are willing to pay higher compensation to employees who have received this type of training.

Table 3
The Regression Results of Wage Determination

Independent Variables	Full Model			Parsimony Model		
	b-coeff	Beta	t-stat	b-coeff	Beta	t-stat
Constant	-56.412		-8.41**	-56.364		-9.39**
Individual Characteristics						
EDU	2.675	.320	6.97**	2.711	.334	7.94**
AGE	1.810	.540	9.46**	1.696	.503	9.52**
SENIORITY	1.237	.243	4.26**	1.400	.272	5.29**
GENDER (M=0 F=1)	-1.918	-.045	-1.13	-2.527	-.061	-1.60
Training Variables						
GOVTRA	-59	-.001	-.03	486	.009	.22
PRITRA	5.734	.144	3.52**	4.978	.128	3.23**
Organizational Variables						
LSIZE	-504	-.047	-1.12			
IC	266	.009	.15			
COM	1.544	.049	.83			
R^2	.685			.664		
Adjusted R^2	.672			.656		
Degrees of freedom	Regression = 9			Regression = 6		
	Residual = 219			Residual = 250		
F-value	52.841			82.345		
Level of significance	.000			.000		

*: p<.05 **: p<.01

Conclusion

The principal aim of this paper has been to measure the impact of pre-job training programs on trainee wages later in their careers, with a special focus on engineers employed by high-tech firms in Taiwan. When the effects of educational attainment, age, and seniority were controlled for, this study found that public training programs have no impact on the later job earnings of participants. However, since only a few of the respondents participating in the study had taken part in public training programs before their current employment, this conclusion must be only a tentative one. More extensive data collection and further research are necessary for a fuller understanding of the relationship between public training programs and wages.

By contrast, this study finds that participation in private training programs does have a significantly positive effect on post-job earnings. Specifically, those who had participated in pre-job private training programs were seen to earn NT$4,978 (US$144) more per month on average than those who had not, a result consistent with that of Booth's study in England. The only difference is that Booth focused on the effects of training provided by former employers. The implication is that the earnings effect of previous training can be carried over from one job to another, regardless of whether that training has been provided by a former employer or by a private training institution.

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Training Effectiveness And Employee Output - A Regression Model Based On Training Transfer And Organization Development Variables

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Despite the considerable amount of money organizations spend on their training investments, it has yet to be determined to what extent such investments benefit the organization. This study attempted to address this issue by describing the relationship between training effectiveness and employee output through regression analysis. Stakeholder involvement, person analysis, and the training transfer climate were found to be the most important predictors of employee output.

Keywords: Training, Transfer, Productivity

Many Human Resource Development (HRD) textbooks and theorists define HRD as a profession for which the main purpose is to assist the organization achieve higher levels of performance. In particular, Broad and Newstrom (1992) define HRD as "the profession that helps organizations to enhance workforce effectiveness and productivity through learning and other performance improvement activities" (p. 4). Similarly, Pace, Smith, and Mills (1991), define HRD as "the integration of individual development, career development, and organization development roles to achieve maximum productivity, quality, opportunity, and fulfillment for organization members as they work to accomplish the goals of the organization" (p. 7).

According to Broad and Newstrom (1992), HRD professionals facilitate performance improvement in the organization in several ways. First, they may help determine the requirements for performance improvement. These requirements, the authors continue, might be for new skills arising from new technologies, products, services, or a changing work environment, or for improvement of skills used in current jobs. Once the requirements for performance improvement are identified and analyzed, then the HRD professionals propose changes in the work environment to support improved performance.

In terms of training, which is "the most commonly recognized HRD strategy to improve performance" (Broad & Newstrom, 1992; p. 5), different estimates project that the annual investment on training by US organizations is somewhere between $50 and $100 billion(Baldwin & Ford, 1988; Industry report, 1994). According to the "ASTD Benchmarking Forum" (1997), these training expenditures account for about 2.88% of the total payroll.

Despite the considerable amount of money organizations spend on their training investments, it has yet to be determined to what extent such investments benefit the organization. Researchers have indicated that only a fraction (10-20%) of the skills and knowledge learned during training are really transferred back to the job (Baldwin & Ford, 1988; Broad & Newstrom, 1992). Further, very little research has been conducted to examine the impact of training on such bottom-line organizational performance as productivity and quality. In addition, very limited research has been conducted to identify which organizational variables may have an effect on the training intervention.

Purpose of the Study

Given the existing lack of knowledge with regard to the relationship of training effectiveness and organizational performance, the purpose of this study was to describe the association of training effectiveness and productivity as well as work quality improvement after new technologies are introduced in the organization. In this study productivity and work quality were measured at the individual level, and each was based on a set of three and five indicators respectively. In this paper, only the relationship between training effectiveness and the productivity indicator of "employee output per unit time" will be discussed. Since no other studies of this kind had been previously conducted, a secondary objective of this study was to develop an instrument with which all the relevant training transfer and organizational variables and constructs could be assessed.

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Theoretical Framework

The theoretical framework of the study was based on the instructional system design (ISD), sociotechnical systems (STS), and training transfer theories, which in turn furnished the training and organizational variables projected to have an influence on trainee performance.

Training Transfer

For the purposes of this study, training transfer is defined as "the degree to which trainees effectively apply the knowledge, skills, and attitudes gained in a training context to the job" (Baldwin & Ford, 1988, p. 63). Although in many respects research on training transfer is still limited (Clark, Dobbins, & Ladd 1993; Hanover & Cellar, 1998; Holton, 1996; Rouiller & Goldstein, 1993; Tracey, Tannenbaum, & Kavanagh, 1995) researchers have identified a number of factors or characteristics that can facilitate or inhibit the application of newly learned skills, knowledge, and attitudes on the job. In particular, a research review by Baldwin and Ford (1988) suggested that training transfer is contingent upon many variables some of which fall outside the training program. Training design, trainee characteristics, and work-environment characteristics were cited as the most important sets of variables. Based on the findings of their research review Baldwin and Ford (1988) also suggested that the expectancy model could assist us in identifying the factors that can influence the motivation with which a trainee will apply the new skills and knowledge back on the job. Baldwin and Ford (1988) further stated that training research cannot continue to ignore that job relevance of training content is a critical factor which affects what is learned, retained, and transferred back to the job.

Some of the training research deficiencies identified by Baldwin and Ford (1988) were investigated further by Clark et al. (1993). Clark et al. (1993) conducted a structural equations modeling study in which 245 participants from 12 training groups responded to a survey questionnaire. The purpose of the study was to explore the effects of several contextual factors on training motivation. The survey instrument was designed to measure training motivation, expected job and career utility of training, peer and supervisor training transfer climate, involvement in decision to be trained, and decision-maker credibility. In this study, career utility was defined as "the perceived usefulness of training for attainment of career goals, such as getting a raise or promotion, or taking a more fulfilling job" (p. 294). Job utility was defined as "the perceived usefulness of the training course to facilitate goals associated with the current job, such as increased productivity, reduced errors, or better problem-solving skills" (p. 294).

In short, the Clark et al. (1993) study revealed the following important findings: (a) perceived job and career utility of training significantly predicts training motivation, (b) involvement in the decision to be trained results in higher perceptions of job and career utility, (c) the credibility of the individual recommending or requesting training affects job and career utility, and (d) perceived supervisory support for training transfer affects anticipated job utility and thus motivation to learn during training.

Another study that examined the relationship between organizational transfer climate and positive transfer of training was conducted by Rouiller and Goldstein (1993). In this study, organizational transfer climate was defined as the "situations and consequences that either inhibit or help to facilitate the transfer of what has been learned in training into the job situation" (Rouiller & Goldstein, 1993; p. 379). In all, 41 situation cues and 22 consequences that were thought to influence training transfer were selected from a previously developed databank consisting of 298 critical incidents. Situation cues were defined as those cues which reminded the trainees of their training or provided them with opportunity to use their training upon returning to their job and they were divided into four categories: goal cues - the type of cues that remind the trainees to use the newly learned skills; social cues - the behaviors and influence processes exhibited by peers, supervisors, and/or subordinates; task cues - the cues that concern the design and nature of the job itself; and, self-control cues - self-control processes that allow the trainee to use what has been learned. Consequences were defined as those actions in the work environment which could affect the further use of what the trainees learned in training. As in the case of situation cues, consequences fell into four categories: positive feedback - trainees are given positive information about their use of learned behaviors; negative feedback - trainees are informed of the negative consequences for not using learned behaviors in training; punishment - trainees are punished for using trained behaviors; and, no feedback - the trainees are not given information with regard to the use or importance of learned behaviors.

After analyzing the data, Rouiller and Goldstein (1993) observed that in organizational units where the transfer climate was more positive (i.e., climates in which situation cues influenced trainees to use what was learned in training and in which trainees were rewarded for doing so), trainees demonstrated more transfer behavior. Furthermore, the analysis of data indicated that trainees who learned more in training performed better on the job, but the interaction between transfer climate and learning was not significant. In concluding their study, the authors

stressed that the field is in need of further research that investigates the relationship between organizational climate, training transfer, and job performance. If such a relationship proves to be robust, the authors continue, then organizational analysis assessing transfer climate should be a requirement in determining whether the organization is indeed ready to support its training program.

Based partly on the work of Rouiller and Goldstein (1993), Tracey et al. (1995) conducted a study examining the influence of the work environment on the transfer of newly learned supervisory skills. The work environment in this study was operationalized in terms of training transfer climate as well as continuous-learning culture which in turn through a principal component analysis were defined in terms of six (social and goal cues; task cues; no-feedback consequences; punishment consequences; extrinsic reinforcement consequences; intrinsic reinforcement consequences) and three (social support; continuous innovation; competitiveness) scales respectively. In all, through a LISREL analysis Tracey et al. (1995) confirmed that the constructs of training transfer climate and continuous-learning culture have a direct effect on post-training behaviors. Furthermore, each of the six training transfer climate scales as well as all continuous-learning culture scales were found to significantly contribute to their respective constructs. However, the authors pointed out that the scale that exhibited the highest path coefficient for both constructs was the one most closely related to the social support system (0.90 for training transfer climate and 0.91 for continuous-learning culture). As Tracey et al. (1995) put it "these findings are consistent with sociotechnical theory and highlight the central role of social factors in establishing supportive training and learning environments" (p. 249). Finally, the authors recommended that future studies should continue to examine the role of the work environment given its influence on training transfer.

In summary, with their study, Tracey et al. (1995) have extended and verified the results of Rouiller's and Goldstein's (1993) findings by indicating that the work environment indeed plays a crucial role in determining training effectiveness. This study also exemplified the importance and the influence of the social system (supervisors, coworkers, and other people who interact with trainees) and thus how sociotechnical systems theory can assist us in designing more effective training programs and organizations in general.

Sociotechnical Systems Theory

Since the early experiments conducted by Trist and Bamford (1951) in the coal mines of England, sociotechnical systems theory (STS), as an OD intervention, has experienced tremendous popularity. As the terms imply, the two basic premises of STS theory are: a) an organization is comprised of two systems: the social system and the technical system; and (b) the organization is an open system greatly dependent on the external environment. The social system is comprised of people performing the organizational tasks. The technical system is comprised of tools, techniques, and methods that people use to perform their tasks. What distinguishes an STS designed organization from traditional organizations is that it places equal emphasis on both the technical and social systems, rather than just the technical system, and tries to achieve high levels of performance through the joint optimization of these two systems. At the same time, the social and technical systems of an STS organization are required to effectively manage their boundaries with the external environment so that any disruptions caused by the latter are kept to a minimum (Cummings & Huse, 1985; French & Bell, 1995; Pasmore, 1988).

Under the STS theory, the organization is also viewed as an open system composed of many subsystems which through differentiation and integration transform inputs into outputs. Another feature of STS organizations is that they are highly participative in nature and thus involve all relevant stakeholders in the decision making process. Furthermore, sociotechnical organizations invest heavily in the development of their human resources. Their goal is to develop multifunctional and well trained employees who in turn through continuous learning become highly flexible and adaptable to changing conditions. Being trained in multiple skills and expertise and having all necessary information and autonomy, STS employees also have the opportunity to perform whole and meaningful tasks with minimal supervision and specification, control variances at their source, and at the same time release management to deal with boundary problems. Lastly, by placing equal importance on the well-being of employees as well as organizational productivity, STS organizations through innovative reward systems and enriched jobs, manage to create high performance environments in which workers pursue organizational goals with higher levels of energy and commitment (Cummings & Huse, 1985; French & Bell, 1995; Pasmore, 1988).

Research Questions

As it was stated earlier, the main purpose of this paper is to describe the relationship between training effectiveness and the productivity indicator of "employee output per unit time". Furthermore, a secondary objective of this study

was to develop a questionnaire with which all relevant constructs and variables could be assessed. In short, the following training transfer variables that were found by the Rouiller and Goldstein (1993) as well as the Tracey et al. (1995) studies to have a direct effect on post-training behaviors were incorporated in the survey instrument of the study:

1. The degree to which characteristics of a trainee's job prompted or reminded him or her to use new skills and knowledge acquired in training (task cues).
2. The degree to which trainees were openly discouraged from using new skills and knowledge acquired in training (punishment consequences).
3. The degree to which supervisors supported and encouraged the application of new skills and knowledge acquired in training (supervisory support for new skills).
4. The degree to which trainees received extrinsic rewards for using newly learned skills and knowledge acquired in training (extrinsic reinforcement consequences).
5. The degree to which trainees received intrinsic rewards, such as praise and recognition, for using newly learned skills and knowledge acquired in training (intrinsic reinforcement consequences).
6. The degree to which the users of the new technology functioned in a work environment which emphasized innovation and competition (innovative-competitive organization).
7. The degree to which the users of the new technology functioned in an environment in which supervisors and coworkers strongly encouraged the acquisition and use of any new relevant skills and behaviors (social support for new skills).

The following 10 variables were also incorporated in the survey instrument and they dealt with the work environment within which the training and new technology interventions were introduced. They were based on Pasmore's (1988) STS assessment survey, the properties of motivating jobs as defined by Hackman and Oldham (1980), and the comprehensive seven year meta-analysis study by Macy and Izumi (1993) in which the d-effects of 60 sociotechnical action-levers on organizational outcomes were examined. The purpose of these questions was to determine the degree to which the new technology was introduced in an organization whose design was consistent with sociotechnical systems principles, which in turn "have been demonstrated to produce high levels of commitment and performance" (Pasmore, 1988, p. 157).

8. The degree to which the users of the new technology functioned in a very participative organization characterized by a high degree of employee involvement (Participative organization).
9. The degree to which the users of the new technology were members of self-directed teams (self-directed teams).
10. The degree to which the users of the new technology were intimately involved in communications and decisions regarding the design and development of the new technology (employee involvement). 11. The degree to which the users of the new technology functioned in a multiskill work environment characterized by a common job classification system (multiskill work environment).
12. The degree to which the users of the new technology worked in a flat and decentralized organization, composed of mini-enterprises functioning within the firm (flat organization).
13. The degree to which the users of the new technology frequently participated in multiskill training and retraining programs and were rewarded for doing so (multiskill training environment).
14. The degree to which the users of the new technology were involved in enriched jobs that required a variety and higher level skills which in turn took a long time to master (skill variety).
15. The degree to which the users of the new technology did a whole and complete piece of work and had the authority to make all important decisions about it throughout the process (task identity).
16. The degree to which in carrying out their work activities required by the job, the users of the new technology received clear information about the effectiveness of their performance from the job itself and their supervisors (job/supervisory feedback).
17. The degree to which the users of the new technology functioned in an environment in which a great deal of information about business was shared with employees (information sharing).

This paper will address the following research questions:

1. If training is used during the introduction of new technologies in the organization, to what extent are the following instructional system components associated with the productivity indicator of "employee output per unit time"?
    a) Needs assessment (person analysis, task analysis, organizational analysis);
    b) goals and objectives;
    c) audience analysis;
    d) d) learning task analysis and/or procedural analysis;
    e) evaluation results (pretest score, posttest score, training retention score).

2. If training is used as a coping strategy during the introduction of the new technology in the organization, what is the degree of association between the productivity indicator of employee output and training performance as well as the identified training transfer and work environment variables?

Methodology

Subjects

The sampling frame of this study consisted of 4097 training, human resource, quality, and organization development professionals who were national members of the American Society of Training and Development (ASTD) and were listed under the Total Quality Management section of the 1995 directory. Out of these 4097 national members, 971 were randomly selected to participate in the study through the circular systematic sampling procedure. Of the returned surveys, 264 had usable data. The response rate for this study was calculated at 27.19%. The average age of the respondents was 43.35 years (SD = 8.32). Fifty-eight percent of the respondents were male and each participant had held his or her present job for an average of 4.65 years (SD = 3.70). Collectively, 96.4% of the respondents had a college degree and represented 46 states. Furthermore, the respondents worked in all sectors of the industry with manufacturing (33.19%), health care (10.54%), and financial services (10.14%) being the majority. Finally, the participants of this study worked in organizations that on the average employed 7,595 employees (SD = 19,244).

In terms of the new technology introduced in the organization, representing 77.2% of valid responses, information technology was the type of technology most respondents introduced in their organization during the last five years. On the other hand, computer-aided manufacturing technologies, materials technologies, and biotechnologies were introduced by only 9.5%, 1.1% and 0.4% of the respondents respectively. The remaining 11.8% of the respondents indicated that they introduced a variety of other technologies, such as new equipment or machinery, production systems, and process operations.

Instrument

The instrument for this study consisted of a mail questionnaire which was custom-designed for the purposes of this study. The questionnaire was comprised of 39 questions and was pilot-tested on a group of 50 participants before the main study.

Results

After the data from the 264 participants was collected, both descriptive and inferential statistics were used to analyze it. The instrument was construct validated through a principal components analysis that utilized a varimax rotation (Table 1). Coefficient alpha was measured at 0.87. Correlational analyses as well as a stepwise regression model (Tables 2, 3, 4) were used to determine how the instructional system components in conjunction with the identified training transfer and organizational moderator variables and factors related to the productivity indicator of employee output.

Construct Validation of Instrument

As shown in Table 1, the principal components analysis that used a varimax rotation produced a four factor solution which accounted for 55.1% of the total variance. The sample size utilized for the principal components analysis was 242 for which the critical value for significant loadings was calculated at |0.33|. The criterion used in order to determine how many components to retain was that of Kaiser (i.e., only components whose eigenvalues are greater than 1 were retained).

Briefly, the first factor which accounted for 33.7% of the total variance had the highest loadings from the following eight variables: innovative-competitive organization; social support for new skills; participative organization; self-directed teams; employee involvement; flat organization; multiskill training environment; and, information sharing.

From the above variable descriptions, it becomes evident that the first rotated factor deals with the general organizational

environment within which the new technology was introduced.Given that the variables that highly correlate with this

Table 1. Varimax Rotated Factor Matrix

Variable Description	STS Org	Job Design	Training Transfer Climate	Rewards For New Skills
1 Task cues	- .07	.33	.74	- .18
2 Punishment consequences	.17	- .10	.53	.12
3 Suprv support new skills	.20	.06	.64	.27
4 Extrinsic reinforcement	.07	.20	.00	.83
5 Intrinsic reinforcement	.27	.06	.35	.61
6 Innovative-comp org	.51	.03	.13	.34
7 Social support new skills	.66	.16	.33	.17
8 Particicpative org	.82	.21	.13	.07
9 Self-directed teams	.56	.34	- .08	.18
10 Employee involvement	.50	.28	.10	.29
11 Multiskill work env	.06	.70	.16	.06
12 Flat org	.52	.48	- .10	- .05
13 Multiskill training env	.62	.18	.20	.31
14 Skill variety	.22	.68	- .01	.18
15 Task identity	.31	.69	.06	.08
16 Job/suprv feedback	.35	.44	.35	.28
17 Information sharing	.79	.14	.15	- .05

N = 242

factor are those that were incorporated in the questionnaire in order to determine the degree to which the new technology was introduced in an organization whose design was consisted with sociotechnical systems (STS) principles, this factor was interpreted as the "STS organization" factor.

The second rotated factor, which accounted for 8.2% of the total variance, highly correlated with the following variables: multiskill work environment; skill variety; task identity; and, job/supervisory feedback. In all, the second rotated factor was successful in grouping the variables that were incorporated in the instrument in order to describe the job dimensions of the work performed by the users of the new technology. This factor was defined as the "job design" factor.

The third factor of the varimax rotated factor matrix accounted for 7.1% of the total variance and drew the highest loadings from the following three variables: task cues; punishment consequences; and, supervisory support for new skills. Unlike the first two factors which dealt with the organizational and job environment in general, the third factor dealt with the training transfer climate in which the application of new skills and knowledge took place. This factor was therefore interpreted as the "training transfer climate" factor.

The fourth and final rotated factor accounted for 6.1% of the total variance and had the highest loadings from the following two variables: extrinsic reinforcement consequences; and intrinsic reinforcement consequences. The last factor can thus be interpreted as the "rewards for new skills" factor.

Correlational and Regression Analysis

The variables and the factor that were found to be significantly correlated with the "employee output per unit of time" productivity indicator are shown in Table 2. Although not significant because of the small sample size (n=27) associated with the training retention variable, the correlation between employee output and training retention is also included in the table in order to highlight the relatively high correlation between these two variables. The correlation between employee output and the posttest score was included in the table for comparison purposes.

As shown in Table 2, the productivity indicator of employee output per unit time was found to be significantly correlated with five variables (task cues; intrinsic reinforcement; multiskill work environment; person analysis; stakeholder involvement in the decision with regard to the need of the new technology) and the training transfer climate factor. Moreover, employee output was found to exhibit the highest correlation with the training retention variable. The correlation between employee output and the posttest score was found to be relatively small and non-significant.

The results of the multiple regression analysis for the employee output indicator are depicted in Tables 3 and 4. The independent variables included in the regression analysis were the four factors as well as the variables of stakeholder involvement (the extent to which relevant stakeholders were involved in the decision with regard to the need for the new technology), and person analysis (the extent to which the training program involved the conduction of a person analysis in order to determine who in the organization needed training in order to use the new technology). As stated earlier, the retention of training material variable was not incorporated in the regression analysis due to the small sample size associated with it. An attempt to include it even on a pairwise case basis resulted in a failure to produce a regression model.

Table 2. Significant Correlations of the "Employee Output Per Unit Time" Productivity Indicator

Posttest	Task Cues	Intrinsic Reinf	Multiskill Work Env	Training Transfer Climate Factor	Person Analysis	New Techn Stakeholder Involvement	Training Retention Score	
Employee Output	.169*	.180*	.182*	.236**	.276**	.282**	.329	.134
(N)	(152)	(154)	(162)	(147)	(155)	(155)	(27)	(75)

**. Correlation is significant at the 0.001 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 3. Stepwise Regression Model for Employee Output Per Unit Time[a,b]

Model	Variables Entered	Variables Removed	R	R^2	Adjusted R^2	Std. Error Of the Estimate
1	New Technology Stakeholder Inv.		.277	.077	.070	22.07
2	Person Analysis	.	.372	.139	.126	21.40
3	Training transfer climate factor	.	.410	.168	.150	21.10

[a]. Dependent Variable: Employee Output Per Unit Time; N = 144

[b]. Method: Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

Table 4. Beta Coefficients for Employee Output Per Unit Time Regression Model

Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
(Constant)	3.919	5.772		1.658	.100		
New Technology Stakeholder Inv.	14.334	4.985	.225	2.875	.005	.960	1.041
Person Analysis	10.577	3.551	.231	2.979	.003	.982	1.018
Training transfer climate factor	3.919	1.757	.176	2.231	.027	.952	1.050

As it is shown in Tables 3 and 4, the produced stepwise regression model accounted for 15.0% of the total variance of the employee output per unit time productivity indicator. Stakeholder involvement in the decision with regard to the need for the new technology accounted for 7.0% of the total variance (b = 0.225, p = 0.005), while person analysis for 5.6% (b = 0.231, p = 0.003). The training transfer climate factor accounted for 2.4% of the total variance (b = 0.176, p = 0.027). From Table 3 one also observes that at 10.7% the shrinkage of R square is relatively small. The very high tolerance values of 0.960, 0.982, and 0.952 in Table 4 indicate that multicollinearity was not a problem for this regression model.

Summary andConclusions

In the aggregate, what the regression model of this study suggests is that when introducing new technologies in the organization employee productivity will be more likely to increase when a) the relevant stakeholders are involved in the decision with regard to its need; b) a person analysis is conducted in order to determine who in the organization actually needs training in order to use the new technology; and c) a positive training transfer climate prevails in the organization.

Based on the data depicted in Table 2, one may also conclude that knowledge of training material immediately after training (posttest score) has a relatively weak association with the productivity indicator of employee output per unit time (r =.134). On the contrary, the retention score, or knowledge of training material three to nine months after completion of training, was found to exhibit a relatively much higher correlation with employee output (r = .329). What this finding suggests is that training retention is a better predictor for employee performance than the posttest score. It should also be noted that of all the correlations depicted in Table 2, the correlation between the retention score and employee output was found to be the highest one. This again exemplifies the importance of the training retention variable when predicting or measuring employee performance after training.

Other variables that were found to be significantly and positively correlated with employee output were: task cues - the degree to which characteristics of a trainee's job prompt or remind him or her to use new skills and knowledge acquired in training; intrinsic reinforcement - the degree to which trainees receive intrinsic rewards, such as praise and recognition, for using newly learned skills and knowledge acquired in training; and multiskill work environment - the degree to which the users of the new technology function in a multiskill work environment characterized by a common job classification system. In short, what these correlations imply is that when a new technology is introduced in the organization the corresponding training program will have a better chance of being successful when a) it is designed to reflect the actual tasks performed on the job; and b) it is implemented in a multiskill work environment which in turn is designed to recognize those who apply the newly learned skills and knowledge.

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Only Time Will Tell: Strengthening the Link Between HRD and Firm Performance

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We report on results from a second round of data on training investments, practices, and outcomes in the United States. Our cross-sectional analyses once again point to a definite link between investments in human capital and organizational measures of performance. Longitudinal analyses strengthen this finding by demonstrating that 1996 human capital investments predict 1997 organizational performance. The evidence, however, also suggests that this relationship may not be unidirectional, but one of mutual reinforcement.

Keywords: Training, Performance, Survey Data

In today's competitive environment where countless organizations have either downsized and outsourced their training and development functions, HRD practitioners in all kinds of organizations and settings are increasingly being asked to justify their existence. Indeed, recent surveys reveal that HRD professionals are feeling enormous pressures to demonstrate the results of the services they provide (Hackett, 1995). Never before have their training and development efforts been under such tremendous scrutiny.

The response by many practitioners has not been surprising. We have witnessed a growing interest in tying investments in human resources to actual business results and organizational performance (Boudreau and Ramstad, 1996; Lam & White, 1998). Numerous organizations have worked out complex formulas to determine the precise return-on-investment (ROI) they are getting on their HRD investments. Unfortunately, such one-off, company-based efforts do not lend themselves well to a primary interest of researchers and scholars in the field of HRD: making systematic comparisons across organizations of the link between HRD investments and organizational performance. Such rigorous analyses require data on a large set of organizations that can only come from survey-based research methods.

Understanding the link between HRD investments and performance is further complicated by issues of time and causality. The case that firm performance influences HRD investments can be argued as strongly as the case in the reverse decision. Certainly, a circular or feedback relationship is also clearly possible. Cross-sectional survey research, however, is limited in its ability to demonstrate the connections between HRD and performance over time, even with the best retrospective questions. Only by gathering information on investments and performance over time can the link between the two begin to be unraveled.

This paper provides an update of the results from our ongoing research into the measurement of the impact and value of human capital investments. Over the last few years, we have been engaged in efforts to develop methods for collecting data on investments in workplace training and development, measuring that investment, and relating these measures to performance outcomes. We report on the findings from the second round of data collected through an ongoing national survey of training and development practices. In particular, we focus on findings from analyses of 85 firms that reported in both rounds of our survey to examine linkages between their human capital investments and firm performance.

Research Questions

To help organizations make wise decisions about their investments in employee training and development, the primary question addressed by our study is the extent to which a relationship exists between firms' expenditures on the education and training of their workforce and measures of performance. We investigate not only the *level* of investments and performance, but also *changes* in both sets of measures using data from two points in time. The results from our first round of data hinted at a strong correlation between these investments and the performance of the organizations (Bassi and Van Buren, 1998a). Furthermore, for a subset of 40 publicly-traded firms, we were able

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to use publicly-reported data to demonstrate an association between the level of HRD investments and *financial* measures of performance (Bassi and Van Buren, 1998b).

In the current study, we address several secondary questions about this link. For instance, we assess whether some types of investments generate greater returns than others. Specifically, we examine whether investments in certain training content (e.g., technical skills versus basis skills) are connected to organizational performance. We also look at the effects of the relative distribution of training investments between internal and external expenditures (i.e., outsourcing) on performance.

The final question addressed by our study is whether investments in different categories of employees generate greater returns than others. In particular, we look at relative investments in the training of low-skill vs. high-skill, low-wage versus high-wage, and exempt versus non-exempt employees, and how such investments may be connected to organizational performance.

Data and Measures

In 1997, we began an effort to collect information on the nature and extent of employer-provided training and development investments and practices in the United States on an annual basis. The survey focuses primarily on measuring firms' investments in education and training, but also collects data on work practices, compensation policies, and subjective measures of organizational performance. From a random sample of 10,000 establishments, we were able to obtain information on the training and development investments and practices of 500 organizations (for the 1996 calendar year).

In 1998, we repeated the data collection process. Rather than a random sampling technique, we used a variety of convenience samples to increase the sample size from the previous round. The samples included the readership of a leading practitioner-oriented journal in the field of HRD, attendees of a large conference on training and development, and readers of a public website devoted to the field. As a result, the number of respondents in the second increased to 800 organizations from the United States. Only the organizations that provided usable data were included in the analyses (754). These data from 1997 calendar-year investments and practices permit us to take another cross-sectional snapshot of investments in training and development and their connections to firm performance.

A subset of 85 organizations reported data in both rounds. Data from these organizations for the 1996 and 1997 calendar years, respectively, allow us to begin to unravel the direction of the relationship between HRD investments and performance. In particular, we examine the effects between 1996 investments and 1997 organizational performance.

Investments in education and training were measured in a number of ways. We collected three measures the level of training expenditures: total training expenditures, training expenditures as a percent of payroll and training expenditure per employee. We also measured investments in terms of the percent of employees trained each year.

In addition to point estimates of these investments, we include several change measures in our analyses. First, we use estimates respondents to the second round reported to us of the percent change in these investments from the previous year. (We subsequently refer to these as "reported" change measures.) Then, using data from the 85 organizations that reported in both rounds, we calculated measures of the actual change in expenditures from 1996 to 1997. (We subsequently refer to these as "calculated" change measures. They are used only in our longitudinal analyses.)

Finally, our data on investments included measures of the percent of training expenditures going to outside providers and the distribution of training expenditures across more than a dozen course types. For the latter, we do not have change measures because of a change in which these data were collected between the two rounds. For the former, however, we include both reported and calculated change measures in the analyses.

The outcome measures used for the analyses in this report were self-reported measures of perceived organizational performance. Respondents were asked to assess whether their organization's performance in 1997 was: (1) better, worse, or no different from 1996, and (2) better, worse, or no different from other organizations that do the same kind of work. Within each of these two categories, respondents were asked to assess five specific aspects of performance, including: ability to retain essential employees, employee satisfaction, quality of product/services, customer satisfaction, and overall profitability. Factor analyses of these performance measures were used to construct two corresponding indices of organizational performance (one for change in performance between 1996 and 1997, and the other for the level of performance in 1997 versus peer organizations)

In addition to measures of investments and performance, our data allowed us to control for the presence of a number of other factors that could potentially affect performance. We assess the extent to which the organizations

used: (a) high performance work practices such as employee involvement with management in business decisions, employee access to key business information, and self-directed work teams; (b) training practices such as train-the-trainer programs, line-on-loan or rotational training staff, training resource center, mentoring or coaching practices, individual development plans, peer review of performance/360 feedback, and training information systems; and (c) innovative compensation practices, including profit sharing or gain sharing, group or team-based compensation, individual incentive compensation, and employee stock ownership plans.

Research Results

We performed two primary sets of analyses: cross-sectional and longitudinal. We focus first on the cross-sectional results from the 754 respondents to the second round.

Cross-Sectional Analysis

For our cross-sectional analysis, we ran correlations to examine the zero-order relationships between measures of investments in training and other human resource practices in 1997, and our measures of performance in 1997. Table 1 reports the significant Pearson correlations we uncovered.

Table 1

Cross-Sectional Correlations, 1997 Data

	Performance Versus Others 1997	Change in Performance 1997
% of Employees Trained 1997	.140**	–
Reported Change in Training Expenditures 1996-7	–	.095*
Reported Change in % of Employees Trained 1996-7	–	.159**
High Performance Work Practices Scale 1997	.191**	.148**
Innovative Compensation Practices Scale 1997	.081*	–
Innovative Training Practices Scale 1997	.104**	–

* $p < .05$; ** $p < .01$.

As we found in our analyses of the first round of data, organizations that trained a higher percentage of employees in 1997 reported a higher level of performance versus peers (Bassi and Van Buren, 1998b). None of the three monetary measures of training investment, however, were correlated with the level of performance. Also, as we witnessed with the first round data, changes in performance were positively correlated with changes in total training expenditures and changes in the percentage of employees receiving training.

These results are consistent with *a priori* expectations. The *level* of training should be expected to be correlated with the *level* of performance, but not the change in performance. Similarly, *a change* in training investments should be expected to be correlated with *a change* in performance, but not with the level of performance.

There are also significant, positive correlations between both measures of overall performance and companies' use of high performance work practices. The use of innovative training practices and compensation practices were only associated with change in overall performance from 1996 to 1997.

The results in Table 1 are also notable for what is missing. None of the measures of investments by course type or by internal versus external were associated with either measure of overall performance. Likewise, the extent to which expenditures are allocated to the training of non-exempt, low-skill, or low-wage employees appears to have no relationship with performance.

Longitudinal Analysis

The longitudinal analyses help us determine whether the relationships we find with the cross-sectional data are spurious or real. Before conducting our longitudinal analyses, we assessed whether firms that reported data for both rounds were meaningfully different from those that reported only in the second round. A logistic regression (with participation in the both rounds as the dependent variable) revealed no significant predictors of participation with the exception of industry. (Results not shown.) Repeat participants were more likely to be located in the Finance/Insurance/Real Estate sector and less likely to come from the Services sector.

First, we examined zero-order correlations between 1996 investments and 1997 performance to see what impact a one-year lag between investments and performance has on the bivariate relationships found in the cross-sectional analysis. Columns 1 and 2 of Table 2 display the Pearson correlation coefficients that were significant. The results display the same general pattern that we observed with the cross-sectional data. That is, the level of investment was associated with the level of performance and the change in investment was associated with the change in performance.

Table 2

Longitudinal Correlations

	1 Performance Versus Others 1997	2 Change in Performance 1996-97	3 Performance Versus Others 1996	4 Change in Performance 1995-96
Training Expenditure Per Employee 1996	.367**	–	.290**	–
Training as % of Payroll 1996	.285*	–	.181	–
Innovative Training Practices Scale 1996	.298**	–	.460**	.484**
Computed Change in Training Expenditures 1996-97	–	.313**	–	N/A
Computed Change in Expenditures per Employee 1996-97	–	.298**	–	N/A
Reported Change in % of Employees Trained 1996-97	–	.296**	–	.063
Orientation Training 1996	-.226*	–	-.049	–

+ < p 10; * p < .05; ** p<.01.

The exact measures that exhibited significant relationships with performance, however, were slightly different. Unlike the cross-sectional analysis, monetary measures of investment were clearly associated both the subsequent level of and change in performance. In other words, organizations that made heavy investments in training in 1996 reported substantially greater improvements in overall performance in 1997 as well as a significantly higher level of overall performance in 1997.

The use of innovative training practices also continued to be a significant correlate, while the use of high performance work practices and innovative compensation practices were not significantly related to performance. One possible interpretation is that the latter types of practices have impacts on performance over a different time frame, either shorter or longer. Other studies of these types of practices have shown strong evidence of their impact on organizational performance (Arthur, 1994; Huselid, 1995; MacDuffie, 1995)

We also find that computed changes in expenditures were significant correlates of change in performance, whereas reported changes were not. It may be that respondents retrospective estimates of these changes were not entirely accurate. On the other hand, respondents' reported changes (but not computed changes) in the percent of employees trained—perhaps an easier measure to for respondents to estimate accurately—remained significant.

Much like the cross-sectional results we found very little evidence that where organizations place their human capital investments affects performance. The only exception was that firms that spent more on new employee orientation training in 1996 tended to report lower performance versus peers in 1997. It may be a statistical anomaly or it is possible that such organizations experienced a large influx of new employees without much previous work experience, the effect of which was a slight drop in performance while they became fully functional.

Columns 3 and 4 of Table 2 shed further light on the causal direction of these relationships. These columns provide the comparable correlation coefficients for our longitudinal panel between 1996 investments and 1996 performance. With the exception of the use of innovative training practices, 1996 investment measures were more strongly related to *1997* performance than 1996 performance. This finding suggests that 1996 human capital investments were more likely to be determinants of 1997 performance than co-determined with 1996 performance.

To more precisely assess the strength of these relationships, we performed several Ordinary Least Squares regressions of firm performance in 1997 on human capital investments in 1996. Table 3 displays the results of these regressions. Only predictors with significant coefficients are displayed. We also included controls for industry sector and size of organization.

Table 3

Regressions of 1997 Performance on 1996 Investments[a]

	1 Performance Versus Others 1997	2 Performance Versus Others 1997	3 Change in Performance 1996-97	4 Change in Performance 1996-97
Training Expenditures per Employee 1996	.279*	.144	–	–
Innovative Training Practices Scale 1996	.278*	.039	–	–
Performance Versus Others 1996	–	.503**	–	–
Computed Change in Training Expenditures 1996-97	–	–	.309**	.201+
Change in Performance 1995-96	–	–	–	.393**
Adjusted R-Square	.166	.319	.074	.191
F	5.720**	7.925**	3.989*	6.502**

+ $p < .10$; * $p < .05$; ** $p < .01$.

[a]Standardized coefficients shown.

The results in columns 1 and 3 of Table 3 reveal that 1996 investments were key predictors of 1997 performance even with appropriate controls. Because of the high level of collinearity among investment measures we dropped all but the strongest predictors of performance from the analyses. In addition, we find that the use of innovative training practices in 1996 remained highly related to the level of performance in 1997. This suggests that it matters not only how much firms spend on training, but also how they apply those expenditures.

Columns 2 and 4 repeat the regressions but with a control for the first round level of, or change in, performance. These regressions illustrate a great deal of endogeneity. Performance at time 1 is a much stronger predictor of performance at time 2 than investments in training at time 1. This is not surprising as serial correlation of performance measures is not uncommon. Furthermore, the training investment measures only account for a small part of the total variation in performance (7 to 17 percent).

As a final step in our analyses, we examined the nature of the relationship between training investments and firm performance more closely. Figure 1 displays two sets of correlations: 1) correlations between 1996 investments

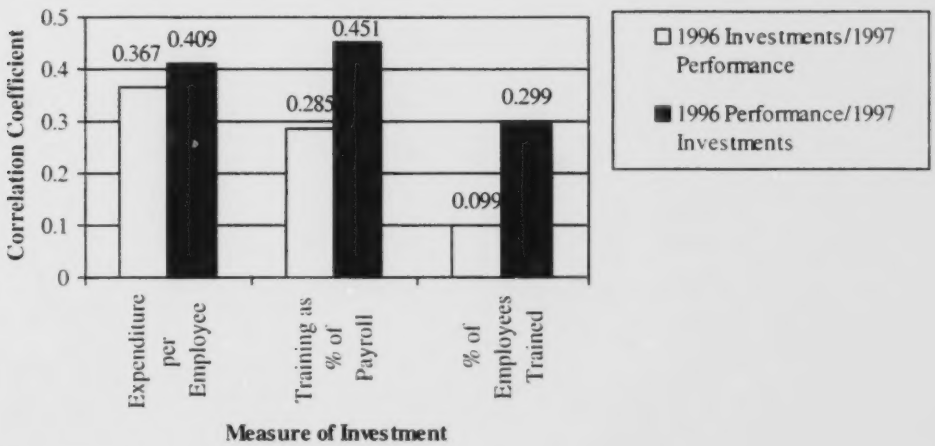
and 1997 performance, and 2) correlations between 1996 performance and 1997 investments. Although two of the three correlations in the former were significant, all three coefficients were smaller than the coefficients in the latter. That is, 1996 performance tended to be a stronger correlate of 1997 training investments, than 1996 training investments were of 1997 performance.

This evidence suggests that, with only two years of data, we are unable to rule out several possibilities. First, performance may be a leading indicator of training expenditures, and not visa versa. Second, and more likely, the link between firm performance and training expenditures may go both ways. High performance leads to greater investments in the training in the following year, which in turn leads to higher performance the next year. In other words, a set of mutually-reinforcing relationships is at work.

Summary

The results of our analyses are highly encouraging. Not only do our cross-sectional data analyses reinforce the association we uncovered previously between training investments and organizational performance, but our longitudinal analyses reveal an especially strong connection between investments in one period and performance in the next period. Furthermore, we find that this relationship holds even when a number of contextual factors are held constant. However, we find relatively little indication that where those dollars are allocated has a significant impact on performance. Rather, it is ensuring a level of spending that benefits everyone that has the strongest effect on organizational-level performance.

Figure 1: Direction of Relationships



Our results, however, must remain tentative as there are also indications that a one-year period may not be the appropriate lag between training investments and firm performance. We find evidence, that the relationship between investments is not unidirectional, and may actually be best portrayed as a set of cumulative, mutually reinforcing effects over time. With each subsequent year of data collection, we intend to examine the length of this lag and the direction of the effects more precisely and definitively.

Ascertaining the link between investments in HRD and firm performance is a difficult, but not necessarily impossible task. Only by doing so will HRD practitioners be able to determine which investments have high payoffs and should be continued, and which have poor results and should either be revised or eliminated. Unfortunately, currently most organizations know very little about what they receive from those investments or how to make those investments wisely. Nor do many organizations have the luxury to experiment with different allocations of their investments to determine for themselves which investments are most productive. Our research provides HRD practitioners with the empirical foundation to demonstrate to others in their organizations that higher levels of wisely-placed investments in HRD will provide valuable results to their organizations—not only in terms of employee learning and development, but also as seen in their bottom lines.

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Contemporary Approaches to Return on Investment from Training

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This paper investigates several approaches that are often used to estimate return on investment (ROI) for training enterprises. It describes various methods of assessing behavior change and the value of that change, and also describes several methods of calculating and using ROI. Some of these methods are benefit/cost ratio, return on investment, the time value of money, formula driven analysis, benefit forecasting, the relative aggregate scores approach, the Stolovitch/Maurice Model and others

Keywords: Return on Investment, Training, Evaluation

Trainers are often plagued by the lack of simple and effective methods for showing the benefits of training. They often resort to "smile sheets" or just assume that if the training is based on a needs analysis it probably is effective. However, these methods cannot tie training activities to the dollar values considered important by most organizations. This puts trainers at a disadvantage when dealing with their more financially literate colleagues. The "bean-counters" in the organization are likely to know exactly how much training "costs" but they may have little idea of its value. We must be able to supply that information.

Several methods have been used to try to show the monetary benefits of training. Some look at the consequences of not training. Others involve analyzing performance records, or costing the training curve under training and non-training conditions. Probably the best known method is cost/benefit analysis. Usually a lengthy and tiresome process, cost/benefit analysis calculates training costs, assesses some performance value that occurred as a result of training, and computes an index of benefits. Performance values are derived from productivity measures such as the number of items produced per shift. If more items are produced after training, the "gain" can be calculated by subtracting training cost to show benefit. However, there seems to be no universally accepted method of doing this. Whichever methods are used to calculate the benefit of training, they are probably tacit admissions that performance improvement efforts are big business and the improvements they make ---or don't make---should be considered seriously.

According to a June 1996 article in *Across the Board* magazine, "American business invested an estimated $30 billion in training in 1996" (Bachler, 1997, p. 98). Bassi (1996) Reported even larger totals for 1995, indicating that employers' total expenditures on training were $55.3 billion. Whichever number you believe, it seems clear that training and development efforts are big business in America. In light of these large expenditures, managers of both private and public organizations are beginning to more seriously question their return on investment in training. Holton (1995) believed that "increasing global competition has led to intense pressure on HRD to demonstrate that programs are directly contributing to the 'bottom-line' of the organization". Phillips, (1995) said, "in any direction one chooses to take in the HRD field, the pressure to measure the return on investment (ROI) is increasing". Employers "especially want to know what benefits they can expect from it" (Dionne, 1996, p.280). They want to analyze the financial costs and benefits of human resource development (HRD) programs" (Parsons, 1995, 17-4). Of the estimated $30 billion (or $52.5 billion) invested in training, are there benchmarks that indicate how much is wasted on inefficient training? The answer to this question is dependent upon another: "What does management want from its training investment and can management's expectations be met in other than traditional bottom-line terms?" (Blickstein, 1996). This manuscript seeks to identify and describe relatively recent "state-of-the-art"approaches to showing the benefits of training. It focuses on various approaches to return on investment (ROI) and describes a number of ways to analyze the costs and benefits of training.

Kirkpatrick's Model

A brief review of, and comment upon, Kirkpatrick's four-level evaluation system is useful. In 1959, while teaching at the University of Wisconsin, Kirkpatrick proposed a model that classified training outcomes into four levels. The model was developed to "clarify the elusive term 'evaluation'"(Brown and Seidner, 1998, p.95). These often-cited levels describe a rubric that is often used to evaluate programs. The first level is the *reaction* level. Reaction may be

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described as how well the trainees like a particular program (Kirkpatrick, 1996). This level can be called a measure of customer satisfaction. Evaluations at this level measure how those who participate in the program react to it. "If training is going to be effective, it is important that trainees react favorably to it. Otherwise, they will not be motivated to learn" (Brown and Seidner, 1998, p.10). The second level of the model is *learning* evaluation. It "can be described as the extent to which participants change attitudes, improve knowledge, and/or increase skill as a result of attending the program" (Brown and Seidner, 1998, p.101). Pine and Tingley (1993) defined level 2 evaluation in terms of measuring the content of the training. The third level is behavior. Behavior can be defined as the extent to which behavior is changed by a training intervention. The final level, results, can be defined as the effect of the training intervention on the bottom line of the enterprise. Results is usually described as a return-on-investment calculation that shows the dollar value of the benefits of training over the cost of the training. Results analysis can include increased production, improved quality, decreased costs, reduced frequency and/or severity of accidents, increased sales, reduced turnover, and higher profits and return on investment (Parry, 1976, p.74). Kirkpatrick is quoted as stating: "It has long been thought important to recognize that the most desirable approaches to delivering instruction (training) are those that are the most effective in terms of results and the most efficient in terms of cost" (Parry, 1976, p.74). Blank, (1982) agreed. He believed that "we need to strike a balance between effectiveness (does it work?) and efficiency (how much does it cost?)" (p.192). What we want to do, then, is to consider costs versus benefits at the results level of evaluation. But where do we start?

Measuring the Change in Behavior

The first thing that must be done is to measure somehow the change in behavior we think the training intervention has produced. Several methods have been proposed to do this.

360-Degree Appraisal Feedback Process

Antonioni (1996) defined 360-degree feedback as a process whereby "individuals appraise themselves and also receive appraisal feedback from their appraisers; immediate supervisor, peers, and from direct contributors if they are managers" (p. 72). Charney and Conway (1998, p. 196) defined 360 degree feedback as "a performance evaluation system that uses input from all employee levels to assess performance. Training is an important factor in helping employees use the process effectively". An effective 360-degree feedback process "offers a major opportunity for organizational members to improve the quality of their work relationships, helps appraisers and appraises effectively define the quality requirements in their work relationships, teaches individuals how to give and receive constructive feedback, and provides a structure for discussing the undiscussables" (Antonioni, 1996, p. 79). An effective 360-degree feedback process not only improves work behaviors, but increases worker performance which in turn, improves return on investment for the organization. In this way, it can be a method for helping to describe the benefits of training.

Performance-Learning-Satisfaction Evaluation System

This evaluation model embraces the domains of performance, learning, and satisfaction. "The *PLS Evaluation System* purports to be a rigorous, yet flexible, evaluation system. It is flexible enough to accommodate almost all situations. It is rigorous enough to consistently honor core questions, techniques, and reporting results as part of every evaluation. In addition to the *PLS Evaluation system* conceptual components, job aids, tools, and references, there is an auxiliary data processing system consisting of a computer, software, a data scanner, and a printer" (Swanson and McClernon, 1996, p. 719). "Performance can be thought of as (a) business results at the organizational, process or individual levels and/or)b) financial results or benefits in terms of money or monetary ratios. Most, but not all, business results can be monatized and turned into financial results" (Swanson and McClernon, 1996, 719). According to Swanson and McClernon, the general financial results goal of the model is to have benefits exceed the costs by a 2:1 ratio. "If the 2:1 return on investment goal is achieved, it can be said that the program achieved 100% of its goal" (Swanson and McClernon, 1996, 719).

The Balanced Scorecard

"The financial- and strategic-planning world is starting to look seriously at a performance measure called the balanced scorecard" (Willyerd, 1997, p. 53). This method tracks the key elements of a company's strategy using both financial and operational measures. "Building a scorecard enables a company to link its financial budgets with its strategic goals" (Kaplan and Norton, 1996, p. 78). The balanced scorecard looks at four key areas of performance and provides answers to the following questions: "(1) How do we look to our shareholders? (Financial perspective.); (2) How do customers see us? (Customer perspective.); (3) What must we excel at? (Internal perspective.); and (4) Can we continue to improve and create value? (Innovation and learning perspective.)" (Willyerd, 1997, p. 53).

This approach helps ensure that all the critical performance measures are evaluated in addition to return on investment issues. "It provides a check and balance so that one area isn't overemphasized at the expense of another" (Willyerd, 1997, p. 53).

Current Status of ROI

Return on investment has been a critical issue for trainers and top executives in recent years and one listed on meeting agendas and discussed in the literature." (Phillips, 1996, p.42). On one hand, "some professionals argue that it is not possible to calculate the ROI in HRD, while others quietly and deliberately proceed to develop measures and ROI calculations" (Phillips, 1997). This leads us to question of what *is* the current status of ROI in the field of performance improvement?

Even that is not really clear. "Currently, it's difficult to pinpoint the state of ROI within the field" (Phillips, 1996, 42). Some HR managers are reluctant to discuss internal practices and it is difficult to find case studies that specifically list the strategies used by training departments in determining ROI. However, a recent study of more than 40 organizations found that the best companies are measuring customer requirements, testing participants, measuring what the client can and will pay for, and moving away from justification (Dixon, 1996, p.82). Dixon stated, (p.84),"One of the most striking findings of this study was that none of the best practice organizations was evaluating primarily to justify training or to maintain the training budget". In addition, the study found that "all the best-practice companies were conducting Level 3 and 4 evaluations selectively rather than consistently"(p. 84). Geber (1995) was consistent with Dixon and believed that "with all the effort that's involved, it would be impractical for most companies to do level 3 and level 4 evaluations on every single course". (p.30).

Calculating ROI

Calculating ROI is not so simple, either. Consider Phillips (1996, 44) "Organizations calculating ROI for the first time should select only one course to measure". It is not practical for most organizations to calculate the ROI on all training programs because the result would be too many calculations and too time-consuming. "Most organizations, for the sake of practicality, decide to evaluate just one or two of their most popular training programs". The respondents participating in Phillips" study were not just content to show that training can result in such improvements as increased productivity and decreased turnover. An additional step was taken to convert these improvements to monetary values that could be compared to costs for a ROI calculation. For hard-data items, such as producuvity, quality, and time, the ROI calculation was easier than those calculations for soft-data items, such as customer satisfaction, employee turnover, and job satisfaction (Phillips, 1966). But consider that he also said, "One approach to ROI is to add a fifth level to the four-level evaluation developed by Donald Kirkpatrick" (1996, 42). In addition to the reaction level, learning level, behavior level, and the results level, a <u>return on investment level</u> is added that compares the training's monetary benefits with the costs. A model has been developed that "tracks the steps in measuring ROI — from collecting post-program data to calculating the actual return" (Phillips, 1996, 43). The model can compare training costs to monetary benefits, assuming that all training programs have reportable results as well as intangible benefits.

Basic Model For Calculating ROI

The basic paradigm for calculating ROI is as follows: "Collect level-4 evaluation data. Ask the question "Did on-the-job application produce measurable results?" Isolate the effects of training from other factors that may have contributed to the results. Convert the results to monetary benefits. Total the costs of training. Compare the

monetary benefits with the costs" (Phillips, 1996, 20). Several approaches currently being used to calculate return on investment by individuals and organizations. The following sections will identify and discuss some of these approaches.

Benefit/Cost Ratio and Return on Investment

Two common formulas used to calculate ROI, according to Phillips, are benefit/cost ratio (BCR) and the return on investment (ROI). "To find the BCR, you divide the total benefits by the cost. In the ROI formula, the costs are subtracted from the total benefits to produce the net benefits, which are then divided by the costs" (Phillips, 1996, 43). "For example, if a training program produces benefits of $321,600 with a cost of $38,233. The BCR is 8.4. For every $1 invested, $8.4 in benefits were returned. The net benefits are $321,600 - $38,233 = $283,367. ROI is $283,367 / $38,233 = 741 percent. Using the ROI formula, for every $1 invested in the program, there was a return of $7.4 in net benefits."(Phillips, 1996, 43).

"Compact" Cost-Benefit Analysis

This method measures job performance after training and is based upon a method used by Godkewitsch (1987) that was later published by ASTD in INFO-LINE publication # 007, entitled "How to Conduct a Cost-Benefit Analysis" (1990). Brauchle (1995) described this as a "compact method" because it uses a formula, not a spread sheet, to calculate ROI. The result is a dollar amount that describes what the training is worth to the organization in terms of the performance of the workers who have participated in the training" (Brauchle, 1995, 17-2). The following five steps are calculated to determine the benefits of training using this method: "(1) Determine the effect of the training; (2) Determine the dollar value of the effect; (3) Find out how many people have been trained; (4) Determine the training cost per person; and (5) Put the information together in the formula and turn the crank." (Brauchle, 1995, 17-2).

There are advantages and disadvantages concerning the use of this method, which seems to be unique in that it assesses the improvement of trainees in standard deviation units and uses as a rule of thumb a 40% increase in performance value for each standard deviation of improvement. The advantages of this method are several: (1) It uses dollars as the unit of measure for the analysis. This unit of measurement is usually acceptable to managers because they understand it; (2) The method is relatively simple to use; (3) It does not require extensive computer capability or number crunching power; and (4) It provides results fairly quickly (you don't have to wait for a one-year budget report). However, it suffers because "(1) It is a norm referenced method, with several attendant problems: (2) It relies on supervisor evaluations which may be of doubtful validity and even more questionable reliability: (3) The value of one standard deviation improvement (40 percent of annual salary, based on other studies) is questionable and should not be used if you have local benchmarks against which to compare it: (4) The dollars calculated as benefits are not real dollars unless you have your own validated benchmarks: (5) It may be difficult to tie the benefits to long term business results if the measures of productivity gain are taken shortly after training: and (6) The results do not answer the question 'Did you train for the RIGHT skills?' ". This method is "...probably worth using if you can establish your own benchmarks for the value of one standard deviation of productivity gain. (It) is less complicated than many others and may provide useful justifications for the training enterprise" (Brauchle, 1995, 17-2).

HRD Benefit-Forecasting Model

"The basic HRD benefit-forecasting model includes methods for determining monetary values for the following components: (1) the performance value to result from the HRD program, (2) the cost of the HRD program, and (3) the benefit resulting from the HRD program" (Swanson and Gradous, 1988, 21). The model, according to Swanson and Gradous, defines benefits as performance value minus cost. "Performance value is the financial worth of the number of performance units that result from an HRD program" (Swanson and Gradous, 1988, 31). This is calculated by multiplying the total number of units expected to result from the program times the dollar amount of one unit. "Cost," according to Swanson and Gradous, is "an item of outlay that is incurred in the operation of HRD programs." These costs may include such items as direct and indirect costs, fixed and variable costs, and amortization. "An HRD cost is any expenditure that the organization chooses to attribute to an HRD programs. What is an HRD cost in one organization may not necessarily be considered an HRD cost is another" (Swanson and Gradous, 1988, p. 91).

The Relative-Aggregate-Scores Approach

This approach, like the time-value-of-money method discussed above, is borrowed from production operations management (POM). As described by (Gaither, 1996, p. 265), this approach might help compare alternative locations for a production facility. We can use it to compare the relative value of training for different tasks or duties within a job, and for assessing the gain in value for that job after training. When we use it to assess the benefits of training (Brauchle, 1992), the difficulty, importance, and frequency of various job tasks is assessed. For each of these, weights are derived. Then, actual performance data are used to show a value for each task, performance value before and after training, and a performance gain for each task, as well as for the job as a whole. The results of this approach can be used to monitor the results of training and also to plan training so limited resources are invested in the most important areas.

Stolovitch/Maurice Model

This model is a combination of numerous ROI models and "draws primarily from the work of Schneider and Wright (1990), Schneider, Monetta and Wright (1992), Robinson (1990), Robinson an Robinson (1989), Spencer (1984), and Stolovitch and Keeps (1995) (Stolovitch & Maurice, 1998, p. 130). It consists of seven steps. *Step 1* Calculate potential for improved performance. A front end analysis is conducted to determine the purpose of the training request, identify the desired and actual performance of training, and identify the appropriate solutions that are relevant, feasible, and acceptable to the organization and the targeted performers. *Step 2* Calculate estimated training costs. These costs include development costs, implementation costs, and maintenance costs. The total cost of all training development, implementation, and maintenance costs is an estimate of the total costs. *Step 3* Calculate the worth analysis. This step verifies the worth of training by comparing the cost of training to potential outcomes. First, estimate the highest number and the lowest number of annual deficiencies or improvements. Second, estimate the high and low cost of each deficiency or improvement. Third, calculate the current annual cost of both the high and low deficiencies or improvements. Fourth, estimate the range of expected deficiencies corrected or improvements obtained from training. Fifth, estimate the high and low annual value of training. Sixth, multiply the high and low annual amounts of training by the length of time the training will last and divide the estimated training costs to obtain the potential worth of the training efffort. *Step 4*. This step includes design, development, implementation, support, and monitoring/evaluation of training. *Step 5*. Calculate the true costs of training. This step is similar to step 2, but new actual figures are used in place of estimated values. *Step 6*. Calculate the organizational ROI. This step involves estimating the percentage of impact likely due from training and calculating the value of results against training costs only on projects where training has been the major performance intervention. *Step 7*. Calculate individual increased value of human capital.

Critical Outcome Technique

"This technique was developed as a means of assessing program effectiveness in a systematic, post-hoc manner" (Mattson, Quartana, and Swnson, 1998, p. 45). The process model contains five steps that make up the model. Outcome definition is the first step in the model and the key question here is "What are we trying to do?" The second step is outcome inquiry and involves identifying the actual outcomes of the program. Outcome verification is the next step in the process. "Did the outcomes really occur as reported by the participant?" and "Would the outcomes have occurred without the program?" are questions asked during this phase of the process. The fourth step is outcome valuation and the primary question is,"How much are these outcomes worth?" The fifth and last step is outcome report. This step summarizes the outcomes in an abbreviated and narrative forms.

Core Financial Analysis Method

"This model and method for analyzing actual and forecasted financial benefits are relatively simple and straight forward" (Swanson, 1998, p. 60). The basic model is comprised of three components that consist of the performance value resulting from the training program, the cost of the training program, and the benefit resulting from the training program. The training benefits are calculated by subtracting the cost of the training program from the performance value of the program. Swanson and Gradous have developed detailed instruction worksheets that explain this model in more detail.

Other Factors to Consider

After benefits have been calculated, we may think the job is done, but two things still need to be considered.

Isolating the Effects of Training

Most of the time, improvements in job-performance are only partially due to training programs. Variables other than the training, such as the trainees' age and work experience, seasonal sales patterns, economic changes, shifts in managerial styles, equipment breakdowns, customer attitudes, etc. may influence the data making it difficult to determine the actual effect of the training upon the ROI results (Shelton and Alliger, 1993). "One way to measure the effects of extraneous factors is to compare the results of a control group with the results of the trainee group" (Shelton and Alliger, 1993, 44). "The experimental group receives training; the control group does not" (Phillips, 1996, 30). Trend-line analysis, forecasting, participant estimation, supervisor estimation, management estimation, customer input, expert estimation, subordinate input, and others factors are additional ways to isolate training's effect on performance (Phillips, 1996).

The Time Value of Money

A thorough consideration of a training or performance improvement initiative should also include an appreciation of the time-value of the money that is saved (or made). This concept has been used for years by production operations managers (Riggs, 1987), and considers two different things: the present value of future dollars and the future value of present dollars. For example, if your ROI calculations indicate that after three years your training intervention will have made (or saved) the company $100,000, you would want to know the present value of those future dollars. The general formula for the present value of future money is $P=F/(1+i)^n$ (Riggs, 1987, p. 132). If we plug in the above value and inflation is running at 10% per year, we get $P=100,000/(1+.10)^3$, or $75,131.48. So we can see that the $100,000 that will be saved in the future is not worth nearly so much in present value. In fact, it is worth considerably *less* than the face value. This fact should be taken into consideration when calculating the value of training. For a different kind of example, suppose you know you have to invest the same $100,000 now for a program that will break even in three years. You want to know the future value of those present dollars that you are spending. Riggs (1987, p.132) gives this formula as: $F=(1+i)^n$, which is $F=(1+.10)^3$, which works out to $133,100. If we had not invested those dollars, in three years they would have been worth $133,100, so the value of the training program after three years must exceed $133,100, or we haven't really shown any gain!.

Many HR practitioners believe that the ultimate level of organization, return on investment, shows the true contribution of training. (Phillips, 1996) The process is not complete "until the results have been converted to monetary values and compared with the cost of the program" (Phillips, 1996, p. 20). Four distinct and important benefits can be derived from the implementation of ROI in an organization. (Phillips, 1997) First, return on investment will measure the contribution the program made to the organization and will determine if it was a good investment. Second, this calculation will determine which programs contribute the most to the organization and allow priorities to be established for high-impact training programs. Third, the ROI calculation brings a focus upon the results of all programs, not just those targeted for the financial evaluation. Fourth, this process can help convince management that training is an investment and not an expense. (Phillips, 1997)

Conclusion

"One of the most common criticisms of trainers is that they don't measure the organization's return on investment in training" (Mendosa, 1995, p. 66). Millions of dollars are expended by both public and private organizations to train new employees as well as present employees. However, "The statistics everyone wants, those that would tell us the return on training dollars spent, has proven to be stubbornly elusive" (Fagiano, 1995, p. 12). We have described in this manuscript several models that help organizations evaluate the benefits of training through return-on-investment. These range from Kirkpatrick's four level model to more complex models that are being used to determine the ROI for both public and private organizations. Most HRD professionals agree that "training doesn't cost .--- it pays and that HRD is an investment, not an expense" (Parry, 1996, p. 72). Laird had stated as early as 1985 that "client-managers need measurement as an indication that they're solving or eliminating performance problems . . . getting something back on the training investment" (Laird, 1985, 241). In today's economy with

down-sizing and world-wide global competition among public and private organizations, it is very important to be able to justify training expenses as well as all expenses of these organizations. All these expenses must relate to organizational performance - growth, profit, market share, etc., and they must also contribute to the "bottom-line".

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HRD and Psychological Contracts: A Case Study of Lifelong Learning

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This paper explores the influence of a programme of "life-long learning" on employee perceptions of their psychological contracts in a longitudinal case study of a major employer in the UK. The aim of the research is to contribute to the debate on the role of HRD and career development in shaping psychological contracts. The case study data show how the programme helped maintain positive employee relations even during a period of insecurity and retrenchments.

Keywords: Life long learning, Psychological Contracts, Career Development

The context for the research is the recent upsurge in interest in lifelong learning at the political level (Lewis, 1997) and the high profile organizations offering "new deals" in psychological contracting, based the rhetoric of *employability* (Herriot & Pemberton, 1996; Martin, Staines & Pate, 1998). There is, however, a fundamental tension between the attempts to offer new deals in psychological contracts (which are often characterised by low trust relationships) and initiatives such as lifelong learning (which are based on high trust relationships) (Cappelli, 1998; Rousseau, 1995). Consequently, it is sometimes argued that few companies have progressed beyond the level of rhetoric of employability (Herriot, Hirsh & Reilly, 1998; Tregaskis & Brewster, 1998).

Arguably, one company that has gone beyond the rhetoric is NCR in Dundee, Scotland. This company has had a major programme of lifelong learning in operation since 1990 and has received considerable external attention in academic and UK government circles (Martin & Riddell, 1996; Tayeb, 1998; Wheatley & New, 1997). The current strategic and financial situation in the corporation, however, has focused attention on costs and benefits of career development and this internal "soul-searching" has provided the impetus for our investigation.

Accordingly, the paper proceeds as follows. First we briefly bring together diverse strands of existing literature on the psychological contract, career development and the new deal of employability to shed light on the potential relationships between programmes like EFA and organizational change. These bodies of literature are used to inform our research questions. In the second section of the paper, we briefly outline the nature and context of NCR's programme of lifelong learning (EFA). In the third section, we examine the results of our case study data to show how the programme has shaped the psychological contracts of employees in the plant over the period 1993-98. In the final section, we discuss the results of our investigation and their implications for researchers and practitioners.

The Literature on HRD, the Psychological Contract and Trust Relations

At the heart of our discussion of the relationship between HRD, career development and trust relations is the concept of the psychological contract, which has become increasingly important in explaining many aspects of current employee relations and performance (Cully, O' Reilly, Millward, Forth, Woodland, Dix & Bryson, 1998; Guest, 1997). We do not propose to review the extensive literature on psychological contract breach here. It is sufficient to point out that recent US research has shown how transactional and relational contracts (Rousseau, 1995) have had different implications for employee behaviour. These studies have mapped out the connections between contract breach, violation, trust relations and important HR attitudinal and behavioural outcomes. First, the extent to which employees are likely to define employer breaches of the contract as violation appears to be moderated by the quality of *trust relations* (Morrison & Robinson, 1997). Second perceived contract violation has been shown to lead to a deterioration in trust relations (Robinson, 1996) and increased levels of *employee cynicism* (Andersson, 1996; Dean, Brandes & Dharwadkar, 1998). In turn, deteriorating trust relations and increased cynicism towards management and the organization are associated with *lower work motivation, job satisfaction and commitment* (Reichers, Wanous & Austin, 1997).

In the UK, Guest and Conway (1997) have examined the antecedents of psychological contracts, their content and their consequences and have provided some important insights into changing nature of UK employment

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relations. They have identified the nature of the *organizational climate* and the *involvement climate* as significant causes of positive psychological contracts. These contracts, in turn, were defined by the extent to which employees perceived their employers to be *fair*, whether or not employees *trusted* their employers, and the extent to which *promises by employers were perceived to be delivered*. Such positive contracts resulted in *attitudinal outcomes* such as high levels of commitment and job satisfaction, and *behavioural outcomes* such as organizational citizenship and effort.

Evidence on the Psychological Contract and Training and Development: Declining Levels of Trust and Cynicism

At least three positions are discernible on the impact of environmental change on psychological contracts.

What Has Changed?

The first position draws on "objective" evidence of changes in psychological contracts and careers. For example, in the UK, Guest, Conway, Dickman & Briner (1996) concluded that "the traditional psychological contract built around job security and a career is still alive and surprisingly well" (Guest et al., 1996, p. 1). They have received some support from economic data that have shown the position on job tenure to be no worse in the early 1990's than in 1975 (Burgess, 1997). Interestingly, these data do not square with the early findings of the recent UK Workplace Employee Relations Survey (WERS, 1998). This research, although silent on employee perceptions of job security, points to significant increases in different forms of flexible working over the last five years – particularly contracting out (Cully, et al., 1998).

The Need for a New Organizational Career Philosophy

The second position or thesis is that although significant market and organizational change may have occurred, organizational career philosophy has yet to catch up in all but the most enlightened organizations. This is the essentially normative argument concerning the new deal being offered by some employers. For example, Adamson, Doherty & Viney (1998) in the UK and Cappelli (1998) in the US have argued that organizations are now talking not of opportunities for advancement and/or progression but of opportunities to improve *marketability* and *employability*. These researchers outline key changes in career philosophy that are predicated on the break-down in long-term employer-employee relationships and future time orientation of careers. They foresee that career progression is no longer likely to involve upward hierarchical movement in the one organization but is more likely to involve lateral development.

What About the Employees?

Essentially, researchers associated with this perspective have acknowledged that important changes have occurred but point to the negative consequences of these changes for careers and psychological contracts (Herriot & Pemberton, 1995; Herriot, Hirsh & Reilly, 1998; Kanter & Mirvis, 1989; Hutchison, Kinnie & Purcell, 1996). The argument here is that psychological contracts have come under pressure as a consequence of the competitive conditions of the 1980's and 1990's and the associated policies of employers in trying to do "more with less" and in "leaning out" organizations. The received wisdom has been that employers have been drawn towards more flexible organizational structures with the "knock-on" consequences for decreasing levels of job security.

Some of these claims are supported by the recent WERS data (Cully, et. al., 1998). One of the report's major conclusions is:

> ...a significant minority of employees feel that the overall deal they have – their implicit, or psychological contract – is a poor one. Lower levels of job satisfaction are particularly evident among some groups and among those who feel inadequately consulted and, to a lesser extent, those who do not have access to *training* (our emphasis)...(p.28).

Firmly rooted in this "what's in it for employees" perspective on HRD and psychological contracts are two lines of relevant discourse and evidence. The first of these is a thesis based on the concept of trust and transitions by Herriot, Hirsh & Reilly (1998). They contend that the recent response of organizations to economic pressures through new dealing has further decreased trust in management to do as they say. Furthermore, recent *perceptions* of job insecurity have exacerbated this low trust dynamic. However, they argue that organizations are responding

to environmental pressures by ever more frequent transitions in products/services, structure and culture. Such transitions have implications for individual career management that require people to participate willingly in achieving a balance between short and long term considerations such as growth and contraction or centralisation and devolution of decisions. This balancing act is contingent on the trust relationships in organizations; if high levels of trust exist, managing transitions becomes easier because employees have faith in the company to do "the right thing" in the long term. Without such trust, employees will become increasingly sceptical and cynical of managerial rhetoric and disengage from or oppose those very transitions on which organizational success is based (Reichers, Wanous & Austin, 1997). This position has received support from a major US study by Tsui, Pearce, Porter & Tripoli (1997) which found that investment in employees appears to "pay off". Their research showed that employees performed better, demonstrated greater organizational citizenship behaviour and higher levels of affective commitment in situations when employers engaged in "mutual investment" relationships with employees. Whereas circumstances in which employees perceived they were working in "under-investment" relationships with their employers produced the worst results on attitude and performance variables such as absence, performance on core tasks and citizenship behaviour. They concluded that the overall pattern of their results provided support more support for the mutual investment relationship, in which "open-ended inducements provided by employers are balanced by open ended contributions from employees" (p. 1113).

Conclusions From the Literature

This discussion on the psychological contract and the so-called new deal leads us to four relevant conclusions. First, the conceptual and empirical literature on both sides of the Atlantic point strongly to the conclusion that promises on, and the level of investment in, HRD and career development are important *antecedents* of psychological contract breach and violation (Andersson, 1996; Robinson & Rousseau, 1994). Second, perceptions of contract breach and violation over HRD and career development are likely to lead to deteriorating trust relations and increased employee cynicism concerning programmes of organizational change. Third, these negative attitudes and emotions are likely to result in significant under-performance in areas such as productivity, quality and innovation because of their affects on the *ability and motivation* of individuals to change (Guest, 1997). Fourth, the jury is still out on the empirical evidence on the "new deal" and the calls for changes in organizational career philosophy. Although there is some positive evidence on careers and new dealing, some researchers have argued that new dealing is mere rhetoric and is likely to be met by lowering degrees of trust, commitment and performance amongst many employees. This is particularly so amongst those employees that lack sufficient external labour market power to benefit from new deals.

Method

The case study is of NCR (Dundee), a Scottish subsidiary of a major US multinational enterprise (MNE). The Dundee plant is a world leader in the design and manufacture of financial services equipment, predominantly automatic teller machines (ATM's) and has won a number of awards for its exporting and manufacturing performance (Wheatley & New, 1997). The programme called Education-for-all (EFA), which has been in operation for eight years, has had a broad focus on education. It has also attempted to be inclusive by engaging the whole workforce.

Education for All

NCR (Dundee) have been one of a small number of high profile companies that have attempted to maintain long-term employment relationships by *investing in employees* and committing themselves to *job security* (Denton, 1998; Martin & Riddell, 1996; Tayeb, 1998). In the early 1990's senior management took a decision to invest in a high risk and somewhat unfashionable programme of long term education as a means of producing significant organizational change. At different points in the plants' history, these measures represented significant high trust initiatives that were intended to signify to the Dundee workforce that they had a long term future with the Company and that investing in people was central to its plans. EFA1 began in 1990 and was intended as a key

2 The key features of EFA are to encourage self-development amongst employees by paying for, and supporting with time-off work, any form of educational course broadly related to the business of the company. Such courses must lead to a recognised national qualification and be supported by the employee's manager.

underpinning for the Dundee company's strategic objectives of growth through continuous innovation, customer-focus and cost-competitiveness. To fully understand the progress of EFA, it is necessary to show (a) how it is embedded in a particular historical and organizational context, and (b) how the programme may have changed over time (Pettigrew, 1995). Our case study plant in Britain began life as a subsidiary of NCR, a Midwestern-based US MNE. The plant had a very patchy early history. Employment rose dramatically between 1945-70, reaching a peak of some 6,300 employees in 1970. However by 1972, NCR's traditional world markets began to diminish rapidly in the face of intense and successful Japanese competition. By 1980, employment in the British plant was down to 820 people, with strong rumours that the plant was scheduled for closure.

By the time of the launch of EFA in 1990, however, the fortunes of the British subsidiary had turned around dramatically with NCR (Dundee) having become the *world leader* in its market. This position has been maintained in a fast growing market in which product innovation has been a key factor. During this period the Scottish company won national and international recognition for its achievements in exporting and plant management (Kotter, 1995;Wheatley & New, 1997). Currently, the Dundee plant employees some 1500 managers, design and development engineers and assembly workers.

In 1997, however, a change in (US-driven) corporate direction towards a "solutions" strategy resulted in significant outsourcing and in the recent sale of manufacturing facilities. These moves have had a clear impact on the Dundee plant, who remain one of the few integrated design *and* manufacturing operations in the NCR corporation. Following these changes in strategy, a general air of uncertainty has pervaded the Dundee plant. Moreover, for the first time since 1980 and despite record order books and production, 200 hundred redundancies out of a total headcount of 1500 employees were announced in March, 1998, following decisions to outsource aspects of production in Dundee. This discussion of the nature of the EFA programme and its contextual embeddedness has important implications for the state of psychological contracts in the Dundee plant at the present time. So, following our conclusions from the literature review, we have sought answers to the following questions of our case study data:

Question 1 During the context of growth and job security (1990-early 1997), did the EFA programme lead employees to perceive that they were being treated fairly in relation on career development and were these perceptions an important influence on employees' psychological contracts?

Question 2 During a context of growth and high job security (1990-early 1997), did the EFA programme have a positive impact on employee trust in management and key outcomes of the psychological contract such as job satisfaction, organizational citizenship and motivation?

Question 3. During the current periods of insecurity (1997-98), did EFA have a reduced impact on employee perceptions of fairness, trust in management and key outcomes of the psychological contract such as job satisfaction, organizational citizenship and motivation, and

Question 4 Have employees in NCR adjusted to perceptions of job insecurity and feelings of powerlessness through increased cynicism and by engaging in a more transactional form of relationship?

The Data

The research is essentially a retrospective account of work that has been conducted intermittently over a four-year period between 1994-98. We have drawn on three sets of data collected between 1993 and 1997. First, we undertook an interim survey of participants on EFA in July, 1995 to assess the programme and its effects on key HRD objectives, including commitment to the company and its impact on careers. Second, primary interview data were collected during the Spring of 1998. These data were collected from twenty semi-structured interviews with employees and their managers drawn from different departments, occupational groupings, levels and stages in their respective careers to capture *maximum variety* of experiences (Miles and Huberman, 1994). Third, we have also used secondary data from in-company surveys that are conducted every six months. These data provide a quantitative account of changes in key elements of employee psychological contracts during the period 1993-97. Thus, we were able to track changes in *inputs into psychological contracts* such as employee perceptions of the involvement climate, job security and the company as an employer. We were also able to assess the changing state or *content of psychological contracts* by using proxy variables for fairness and trust such as recognition from management for doing a good job and the extent to which employees feel valued by the company. Finally, we could assess changes in key measures of *outcomes of psychological contracts* such as individual job satisfaction and overall satisfaction with the company.

The Results

Our first question was aimed at assessing employee expectations on career development and the extent to which these had been satisfied during the context of job security and growth. As our literature review has shown, these expectations are an important influence on perceptions of psychological contract breach.

The Impact of EFA on Expectations of Career Development.

The 1995 survey data showed that participants on EFA programmes were positive about career development in the company with nearly 40% of respondents changing jobs or been promoted since completing their EFA courses. Moreover, of that 40% nearly three-quarters claimed that EFA had been a contributory factor in securing promotion. Respondents were also asked how successful their EFA courses had been in achieving their career development aspirations. Nearly one third of respondents attributed part of the career development to EFA with a further 10% prepared to believe that it might be a future contributory factor.

The interview data conducted in 1998 were broadly consistent with these earlier perceptions. Although there were variety of reasons given for undertaking an EFA programme, the most common response was for some form of self- development. However, most interviewees also saw education as providing the means to either upward promotion or to a sideways change in their job.

The longer-term attitude survey data on training and development (covering the period 1993-97) provided some inconsistent data. On balance, however, it showed that respondents felt that the company had encouraged skill development and that staff in the plant had been given enhanced opportunities to develop their skills between 1993 and 1997.

In summary, the impact of EFA on expectations of career development was positive and these expectations were broadly being met by the EFA programme.

The Impact of EFA on the Outcomes of Psychological Contracts in the Plant during 1993-97

Our second, third and fourth questions concern the impact of EFA on the outcomes of psychological contracts and the influence of context. During the earlier period of job security between 1993-97, the data from the 1995 survey showed that EFA had a positive impact on key elements of employees' psychological contracts. For example, employees reported EFA as having a significant impact on their view of the company as an employer and was also more inclined to make them stay with the Company.

Three years later, however, our interviews raised some questions about psychological contracts in the plant. A number of interviewees expressed views that were indicative of an emerging transactional contract, with stress being place on how the programme made them more employable externally. Thus although most interviewees saw NCR as a fair or good employer that treated people consistently, only a few saw EFA has having made them any more favourably disposed to NCR than previously (admittedly from a high base). Furthermore, in response to questions concerning what they actually gained from participating in EFA, employees cited three main benefits all of which related to their own feelings of self worth, development and features not directly connected with knowledge and skills acquisition.

1. EFA as compensation for dull jobs,
2. EFA as personal development, and
3. EFA as group development

These qualitative data were broadly in line with the survey results of the whole workforce comparing 1993-97. Thus, by 1997, certain key aspects of employee perceptions of the psychological contract were significantly less positive than in 1993. The main areas of concern expressed by employees were:

i. There seemed to be less faith in colleagues' ability to cooperate to get the job done.
ii. Unconvinced that clear and well documented policies and procedures were in place to deal with inappropriate behaviour
iii. Less satisfied with the company and their job.
iv. More negative about the company as compared to other companies as an employer.

Even where the results of the comparison between the two period were positive, such as involvement in decision making, the data gave no impression that the Company had done well in this regard. This finding was supported by the interview material, which implied that opportunities for involvement were not meeting employees' expectations.

These results described in the previous paragraphs raise the question of whether the context of uncertainty and insecurity had begun to affect the psychological contracts in the plant. Certainly, the results of the question on job security showed a dramatic and understandable decline between the two time periods. Consequently, we would have expected this feature of the psychological contract to have a marked negative influence on virtually every other aspect of company policy and practice. The survey data on the whole workforce shows the predicted negative influence of job insecurity appears to have been borne out, with the exception of a significant improvement in two key areas, i.e. in the area of *career development* and in the *involvement climate*. Such a finding, we believe, allows us to speculate on the positive long-term influence of EFA on *trust relations* in the Dundee plant. In short, our belief is that EFA has had a strong compensating effect. Thus, we argue, had it not been for EFA (in combination with other HR policies), it is likely that employees (particularly those that participated in the programme) would have held even more negative perceptions of the company and of their future with it. At least in the areas of career development and involvement, employees saw the company as continuing to deliver the old deal. This speculation is supported by the interviews with EFA participants. Although most interviewees felt less secure at the present time because of the uncertain future of the Dundee plant, in general these feelings did not appear to influence their attitudes to the company, with only a minority feeling more negative than before.

Discussion

To-date most of the interest and research on life long learning has focused on government policies and educational provision and little, if any, systematic research has been undertaken on organizations that have well-developed programmes in place. The data from the case generally show that the programme has had a positive influence on career development and psychological contracts during the period of study. This was even so during the current context of uncertainty and job insecurity.

Concerning our first question on the relationship between EFA and perception of fairness on career development, the quantitative and qualitative data strongly supported the conclusion that EFA had a positive influence on employee perceptions of career development. To a lesser extent, because we only have interim data, they also support the association between participating in EFA and internal movements and transfers within the company. The second question focused on the relationship between job security, EFA and the psychological contract. In this connection, EFA was found to have had a marked positive influence on employee psychological contracts, in that it had helped create commitment to the company, caused employees to see the company as a fair employer and also give them a sense of self-worth.

The third question explored the relationship between the context of job insecurity and perceptions of trust and key outcomes of the psychological contract. Here, we can conclude that EFA had remained an important symbol of the old deal and a signifier to employees that they had a long-term relationship with a "good employer." In contrast to nearly every other aspect of employee perceptions about the company and their relationships with it, career development was seen in a positive light. Indeed, we believe that the data show – and our subsequent discussions with mangers support this assertion - that promises kept on EFA have helped mitigate the potentially damaging effects of redundancies and uncertainty about the future of the Company. Our fourth question concerned the move to more transactional forms of relationships and the consequences of these for future organizational change. Our data in these areas are not robust but are indicative that job insecurity has led to employees beginning to perceive a breach of the old deal by the company and to the emergence of transactional contracting by employees in their attitudes to EFA. As might be expected, employees were beginning to stress benefits that were more connected with external employability and as compensation for what they were unable to get from working in the company.

Our overall conclusions and speculation are in line with the recent arguments of Herriot, Hirsh and Reilly (1998) and the findings of Tsui, Pearce, Porter & Tripoli (1997) discussed previously. We believe that one of the strongest benefits that the programme has brought to this organization is the high trust response from employees in the company, even under conditions of adversity. Although morale and overall satisfaction with the company is currently low, employees still see themselves as being treated fairly, especially those who have taken advantage of EFA courses. Moreover, employees have not resisted the current changes through taking industrial action, even

though they would have been strategically placed to do so due to booming order books. Indeed there is every sign, according to HR staff and union officials, that they have co-operated with the changes being put in place. However, we believe there are strong warning signs that the trust dividend reaped through a programme like EFA may be diminishing. The data suggest that employees are focusing more on the employability aspects of EFA, which in tight labour market conditions may lead them to use education as a passport out of the organization (Cappelli, 1998). Perhaps more importantly, we speculate that any significant move towards more transactional contracting by pruning EFA may create a downward trust dynamic that will make organizational change more difficult to achieve. This is particularly likely to be so, as a number of studies have indicated (Haskell, 1998; Huemer, von Krogh & Roos, 1998; Nonaka & Tageuchi, 1995), when a company relies on knowledge creation and on the build-up of intellectual capital for its global market leadership.

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Comparing International HRD Practices and Experiences With Cross-cultural Theories and Research: A Case Study of the Office for National Statistics

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In this paper, the authors report on the experiences and practices of a small-scale international HRD provider and compare them to cross-cultural HRD theory. This case study highlights the importance of cultural issues to international HRD, identifies steps to bring international HRD organizations into line with theory, and raises issues for advancing those theories based on practitioner experiences.

Keywords: International HRD, Cross-Culturual Theory, Case Study

The setting for this study is the Office for National Statistics (ONS), a public sector department of the British government responsible for the collection and analysis of most official statistics as well as for the registration of births, deaths, and marriages, and the ten year population census. The Human Resource Development (ONS HRD) team consists of 27 internal HRD trainers and consultants who provide a wide range of leadership, management, computing, statistical, and general skills training and consultancy in addition to supporting other employee development initiatives.

Research Problem

Since 1995, ONS HRD has been involved in projects with statistical organizations in other countries with funding from the UK and European Union development aid budgets. This involvement began with a Bulgarian management development program, and was expanded in 1996 with a major program, on-going, to provide leadership and management training in the Hungarian equivalent of the ONS. A similar program in Slovakia followed, as well as work with the Ukraine and Russia. At the time of writing, further work was being arranged in Europe, as well as Asia and Africa.

As ONS HRD's international workload expanded into new countries, its senior management became increasingly interested in the need to offer a professional service to match other potential providers. Professional service in this instance was defined, in part, relative to perceived best practice as informed by HRD theory. Although this practice-based research was stimulated by the need to improve HRD effectiveness, ONS HRD managers were keen to also contribute to the theory-research-development-practice cycle (Swanson, 1988) by informing the development of HRD theory. The research problem was therefore defined to identify how existing international HRD experiences and practices at the ONS compared with best practice in cross-cultural consultancy, and to draw conclusions about the changes needed to those practices and the implications for advancing theories.

Theoretical Framework

The most frequently cited theories on culture are those of Hofstede (1980), the Halls (1990), and Trompenaars (1994). In addition, a large number of other published works have described research and reflective practitioner accounts either on the culture of a single country or on the general topic of cross-cultural consultancy and international HRD. A literature review of books and articles led to a clustering of content into the headings of: national cultures and their differences; the influence of national cultures on organizational culture; the suitability of Western HRD for application in other cultures; and the implications for HRD consultants. Each are addressed here in turn.

The published literature contains many definitions of culture, all rather close in meaning to Hofstede's, "culture is the collective programming of the mind that distinguishes the members of one category of people from

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those of another" (1980, p. 25). One natural grouping of people is at the national level where certain behaviors are favored and others repressed, and the norm for a society is the most common and generally most acceptable pattern of values, attitudes, and behavior (Adler, 1991). Those patterns of values, attitudes, and behaviors are then disseminated to new members by symbols and artifacts (Kroeber & Kluckhohn, 1952, cited in Adler, 1991), and are manifested through characteristics such as communication and language, dress and appearance, food and feeding habits, time and time consciousness, rewards and recognition, relationships, values and norms, sense of self and space, mental process and learning, beliefs and attitudes (Harris & Moran, 1979). When combined, these factors create distinctive national cultures which most likely contain sub-cultures, including regional, occupational, educational, ethnic, religious, gender, and age-group cultures.

Several authors have sought to define the dimensions along which national cultures differ. For example, Hofstede (1980) identified four major dimensions of culture: power distance, uncertainty avoidance, individualism, and masculinity; and to those Hofstede (1991) later added long-term orientation. Hall and Hall (1990) also illustrated how cultures differ according to the four basic principles of cultural interfacing: space, time, information flow, and context. Trompenaars (1994) examined how cultures differ in relationship to time, other humans, and towards nature.

In Eastern Europe, national cultures have been influenced by the common heritage of adhering to a totalitarian form of government (Harris & Moran, 1979), although several authors warn of assuming that national cultures are therefore the same. Hungary, for example, was considered ahead of other Eastern European countries in terms of market orientation (Czaban & Whitley, 1998), and since 1989 differences in policies as well as changes in structural and economic positioning have amplified differences between countries (Estrin & Peiperl, 1998). Consequently, such countries cannot be viewed has having similar, nor static, cultures.

At a level below national culture, organizations have their own culture and sub-cultures (Schein, 1985). Some of the differences between organization cultures are due to the effects of national culture (Adler, 1991) as evidenced from the same problems being addressed using different means in each country (Trompenaars, 1994, DiStefano & Lane, 1992), the different operation of human resource management within national cultures (Sparrow, Shuler, & Jackson, 1994, cited in Tregaskis, 1998), and different experiences and understanding of common organizational terms such as authority, bureaucracy, and accountability (Harris & Moran, 1979). Wigglesworth (1995) also noted the influence of such factors as national values, perceptions, cultural heritage, unique ways of doing business, behavioral customs, and the processing of information.

In Eastern Europe, where ONS HRD does all of its existing international consultancy, organizational cultures have also been affected by problems in recruiting sufficient qualified employees (Estril & Peiperl, 1998), the challenges of transition from state-ownership (Cseh, 1997), the need for innovative management development approaches (Cseh, 1997), and the need for adapting theories and methodologies across cultures (Santalainen & Taino, 1984).

As a consequence of national culture and its impact on organizations, there are significant issues for HRD consultants working outside of their own culture. Some deal with the appropriateness of applying US American organization and management theory in other countries, and specifically the need for adaptability of content, systems, and practices (Adler, Campbell, & Laurent, 1989, Tregaskis, 1998). Others deal with the need for HRD consultants working outside of their own culture to be aware of: the cultural values and assumptions inherent in HRD (Sorensen, Head, Johnson, & Mathys, 1991), knowledge of the visited culture (Harris & Moran, 1979), and knowledge of their own culture (Wigglesworth, 1995). That is in addition to consultants requiring other competencies viewed as fundamental for working in other countries, such as the understanding of others, tolerance of ambiguity, interaction skills, and persistence (Wigglesworth, 1995).

Research Questions

The research problem was to identify how existing international HRD experiences and practices at the ONS compared against best practice in cross-cultural consultancy as suggested by theory and research, and to draw conclusions about the changes needed to those practices and the implications for advancing those theories. The theoretical framework identified several key aspects of best practice on the need to adapt HRD content and processes, develop international competencies, and identify local business etiquette. The research was therefore designed to answer the following questions:

- What was the existing level of awareness of cross-cultural HRD issues among ONS consultants, how were cultural competencies developed, and how was the utility of international HRD and cross-cultural theories perceived by those consultants?
- What processes were in place to adapt ONS HRD course content, HRD processes, and trainer behaviors to suit host countries, and what were the roles of the various parties (ONS HRD, funding agencies, host countries) in assessing the suitability of, and adapting, the content, processes, and behaviors?
- What had been the experiences of ONS HRD consultants during international work (including identifying critical incidents) and could those be understood through the theoretical framework?
- What changes to the existing ONS HRD practices were suggested by the theoretical framework?
- What lessons from ONS experiences offer opportunities for advancing HRD understanding?

Research Design

As Torraco (1997) stated, "case studies, more than other methods of study, allow researchers to focus specifically on a phenomenon of interest, and they offer the greatest potential for revealing the richness, holism, and complexity of naturally occurring events" (p. 130). Even though this research was seeking to provide information to improve the effectiveness of one specific HRD team, the researchers wanted to use case study methodology to design an instrumental study (Stake, 1994) so as to understand the issue of international HRD and help advance theory.

Qualitative research methods were used given their suitability for exploration and discovery in times of emerging realities, and rapid and fundamental change (Swanson, Watkins, & Marsick, 1997). Interviews were preferred to questionnaires given the small number of consultants involved, the ease of access to them, the potential to explore answers in depth, and the past success of interviews in the organization. Observations were not possible given the cost of attending international courses and the timing, which did not coincide with course delivery. Organization records studied were: course programs and materials, evaluation reports, and reports of visits made by senior ONS consultants to Hungary and Slovakia. As it happened, those documents were useful preparation for the design of interviews but provided relatively little information when compared with interview evidence.

Interviews were arranged with representatives of three groups: funding agencies (three interviews with the UK's Department for International Development, the Training for European Statisticians project in Luxembourg, and the European Commission); ONS HRD consultants (six interviews, three with the most experienced consultants and three with a sample of the six other consultants selected to cover different levels of experience); and other ONS staff with recent international consultancy experience (three interviews with consultants, all of whom had provided statistical training advice to countries in which ONS HRD was yet to work but where contracts were possible in the future).

Semi-structured interviews were used whereby all interviewees were asked the same set of core open-ended questions, although in a conversational format so that not all interviewees were asked questions in the same order. Those core questions were designed around the research questions, in addition to those on their backgrounds and relevant experience. Three separate lists of additional questions were used for interviews with those from funding agencies (dealing with their role), ONS HRD consultants (dealing with HRD-specific issues and experiences), and other ONS consultants (dealing with issues specific to the countries they had worked in). In addition to core questions, the interview structure allowed sufficient scope for additional probing, which mainly occurred to explore examples of critical incidents (stories from practical experience).

All interviews were completed by the same interviewer in September 1998, and were recorded on audio-cassettes. Interviews were listened to again by the interviewer, key points transferred onto a word processor file, clustered for analysis under research question headings, and a chronological chain of evidence created to order data (Swanson, et al, 1998). The authenticity of the data analysis was verified through feedback to informants (by interview and draft written reports), which also provided additional information on the meaning of outliers and guided the correct weighting of evidence. The literature review on international HRD was also re-visited and expanded slightly at the analysis stage to provide a deeper understanding of emerging themes (Marsick and Watkins, 1997).

Results and Findings

Awareness of Cultural Issues, Development of Cultural Competencies, and Perceived Utility of Theories

The interviews identified considerable enthusiasm for international HRD within the ONS team and a desire for continuing learning from experiences. However, very few interviewees knew of cross-cultural theories, and some expressed doubts about how theories could benefit their work. For example, the view was expressed that the need to address cultural differences was reduced considerably by offering mainly process models.

There was a strong focus on developing competence through experience, and in that way the most experienced consultants had developed a good awareness of practical cross-cultural issues which they then sought to share with the less-experienced through oral briefings and a practice of pairing experienced and inexperienced consultants for international projects. Nevertheless, awareness of cultural issues varied considerably between consultants depending on the nature of their experiences and the thoroughness of their subsequent reflection, and was affected by the unsystematic way in which cross-cultural knowledge was disseminated within the team. Apart from the most-experienced consultants, interviewees reported little preparatory work on the culture of an assisted country prior to visits, and one less experienced consultant commented that s/he, "went abroad appreciating it would be different but was completely unprepared for how different it turned out to be." Preparation for the more experienced consultants was more thorough, although it concentrated on the visible components of culture, and they relied more on experience in the country to develop any deeper understanding.

Processes to Adapt Course Content, HRD Processes, and Trainer Behaviors

As a consequence of experience-based learning, cultural consideration within the consultancy team focused on the practical and the visible. In adapting processes and content, the emphasis was therefore placed on translation, logistics of working in other countries, obvious differences in business approach, and coping with less participative training than would be the case in the UK.

Work to adapt material to address less visible components of culture was reported to be achieved through a lengthy period of discussions between senior HRD consultants and representatives of international organizations. Those discussions considered the suitability of particular material and its match to the values of assisted organizations. Although there was no evidence that the process was theory-based, the outcome was reported as being well-received by the assisted organizations suggesting a good degree of effectiveness achieved by the practice-based approach to international competence development within the team. Documents also provided evidence of very positive reactions to the training in every country, and further evidence of obvious learning transfer.

Funding agencies and aid co-ordinators were interviewed to explore their role in the adaptation process. Their responses suggested a solid practitioner-based grounding on the importance of cultural issues, the need to adapt material, and the different cultures within Europe. However, they reported themselves as being poorly placed to discuss specific HRD cultural implications, leading to their view that consultants should have that responsibility.

Experiences during International Consultancy and their Relationship to the Theoretical Framework

The interviews identified many examples of where culture had affected the HRD content or process. Here are ten, offered to illustrate the variety of experiences and to provide the article with practical 'color'. Their relationship to the theoretical framework is explored in the conclusion section.

(a) Language - one consultant commented that, "the scary thing about working abroad was the language... I was not prepared for its impact... I could not read body language nor pick up on tone of voice." Those interviewed reported how using interpreters reduced the amount of deliverable content and introduced doubts about the accuracy of information received by trainees. Several estimated that they covered around two-thirds of what could be achieved with a British audience. Consultants also spoke about problems in translating such words as cascade, stakeholder, and leadership.

(b) Availability of local trainers - the original intention had been to transfer, through a staged process, the training program to internal trainers of the host country. However, neither the Hungarian nor Slovakian organizations employed trainers and instead added training work to job descriptions of already busy employees who lacked a knowledge of management theory and felt somewhat uncomfortable with participative training techniques.

(c) Training style - Eastern European managers were accustomed to a lecture-style of training either in a large group seated 'theater-style' or smaller groups seated around meeting tables. The British trainers were accustomed to 'U-style' seating without tables, and some found the setting in Eastern Europe daunting and less suited to encouraging participation and openness.

(d) Perceived need for management training - it was reported that attitudes varied among senior managers, mainly according to their past experiences. Some lacked any experience of management training and had problems with the concept and the need - a situation found rarely in the British public sector.

(e) Ways of doing business - ONS consultants reported several shadowside issues (Egan, 1993) including: the role of tribes as a hidden hierarchy in Kenya; the lack of openness or desire to be critical of senior management in some Eastern European situations; the need to relate personally with officials rather than relying on formal authority or systems in Botswana; and the difference between the British working day and practices in some other parts of Europe.

(f) Greater satisfaction for trainers - according to several consultants, "participants in the Eastern European programs were generally extremely positive about being involved, and displayed far more enthusiasm than British managers attending similar courses."

(g) Humor - several interviewees spoke about the significant role played by humor in the British training room and problems in using it in other countries. One interviewee highlighted potential problems: "The different sense of humor was hard - some jokes were not laughed at. I told one story, tried to be funny, but it may have offended some. I learned to be very careful with humor."

(h) Similarities between professional statistician participants in each country, many of whom were reflective learners (Honey & Mumford, 1986) interested in detail more than the big picture, and with issues around combining manager and statistician roles. Interviewees reported that the professional statistician culture appeared to have a strong influence across national boundaries.

(i) Generation differences - interviewees reported the younger managers as having better spoken English, being more enthusiastic of Western management theories, and being less skeptical of the help offered through the consultancy compared with some of their older more senior colleagues.

(j) Value differences - several interviewees spoke of observable differences in behavior due to apparent value differences, most notably on political correctness as defined in Britain. On one occasion, "such differences caused embarrassment for us and we were uncertain how to react."

Changes to Existing Practices Suggested by the Theoretical Framework

The interviews suggested that the ONS consultants had developed an effective operational level of cultural skills and awareness through practical experience, and interviews combined with documentary evidence suggested successful outcomes from the design and running of international programs. The evidence also suggested that some of the ONS experiences could have been anticipated from the theoretical framework (thus saving time), and also that the informal and incidental learning processes could be usefully supplemented by formal systems informed by the theoretical framework. The particular areas for development were:

(a) Increasing the value placed on cross-cultural HRD theory within the team - the current level of theoretical knowledge, and the perceived utility of such theories, were mixed. Supplementing reflective practice with theory offers a means to avoid potentially costly mistakes, particularly when preparing to work in a country for the first time.

(b) Introducing a systemic, systematic, theory-based process for the cultural reviewing of HRD processes and course material - current adaptation steps are based on past experience in other countries (assuming few effects from different national cultures), from experiences in the assisted country (possibly resulting in issues emerging during program delivery), and from discussions with the assisted country during program development (assuming clients are well placed to judge the suitability for their culture of material and processes).

(c) Introducing a formal, systematic approach to training and developing international consultants and sharing cross-cultural knowledge within the consultancy team, and increasing consultants' knowledge of cross-cultural HRD theory. Current approaches offer international experience over several years, supplemented by informal sharing of knowledge and experiences within the team. Development can therefore be slow and unreliable.

(d) Identifying sources of cultural information on the countries consultants plan to work with - one problem with being an occasional international provider is that experiences are limited and fewer in number and variety than in a large organization specializing in international consultancy.

(e) Developing a clearer understanding with funding agencies and aid coordinators of where responsibilities lie for assessing the cultural implications of requests for HRD support, offers of HRD help, and the delivery of HRD services. Currently, too many assumptions are made that others are assessing projects for cultural issues.

Opportunities for Advancing International HRD Understanding

The research provided some specific practitioner examples to supplement existing theories, and in doing so identified two areas where further research could advance theories to the benefit of practitioners. Those areas were:

- the need for information on the relative influences on organizational cultures of: national cultures; sectoral cultures (e.g. public or private); professional cultures (e.g. statisticians, accountants, lawyers); multi-national organizational cultures (i.e. the influences of a foreign head office with a strong corporate culture); tribal and other sub-cultures; and generational cultures (which were more noticeable in Eastern Europe more than in Britain);
- the various costs, in time and precision, of training through interpreters.

Conclusions

In the case study, the authors looked to identify how ONS HRD international experiences and practices compared with best practice in cross-cultural consultancy, and to draw conclusions about the changes needed to those practices and the implications for advancing the theories.

Through interviews with consultants and a study of records, the authors determined that ONS HRD had run successful training programs in Eastern Europe, as perceived by clients, where there was documented evidence of training transfer. The success of those programs had been achieved based on little knowledge of cultural theories, and instead by applying learning from experiences and using informal systems for sharing experiences between consultants. That success highlighted the effectiveness of a 'learning by doing' approach, although discussions on consultants' experiences also highlighted negative consequences. Firstly, consultants can take a long time to develop a satisfactory level of knowledge and skills on international HRD, which may affect their performance and confidence. Secondly, the approach relies on consultants reflecting on their experiences systematically and critically, and the degree of such reflection varies between consultants. Thirdly, it requires a systematic process for sharing learning among consultants, and an informal or unsystematic process will be less effective. Finally, it will likely produce knowledge of international HRD focused on more visible components of culture (e.g. language and ways of doing business) rather than on such components as individualism or a particular temporal focus, and that limited focus could influence the effectiveness of steps to adapt content and processes.

Based on these findings, the authors concluded that ONS HRD would benefit from making a number of changes to their practices, including by: seeking ways to increase the value placed on, and use of, HRD theories; introducing a systematic, theory-based process for the cultural adapting of content and processes; and introducing a formal systematic approach to training international consultants and for sharing learning within the team. The authors argue that these findings would be applicable to other international HRD providers whose current approach matches that of the ONS.

In addition to examining ONS practices in the light of HRD theories, the authors also examined theories in the light of ONS experiences, and found a clear link in the areas of: the need to adapt HRD content, systems, and practices; addressing different understandings of organizational terms; dealing with unique ways of doing business; and the need for consultants to develop a knowledge of cultural values and assumptions in HRD, a knowledge of values and assumptions in their own culture and that of visited countries, and developing their understanding of others, tolerance of ambiguity, interaction skills, and persistence. The ONS experience also supported existing research on the nature of the challenges facing Eastern Europe.

The ONS experiences also identified several issues not covered by the literature review, or which emerged with greater significance than expected: the influence of the statisticians' professional culture on the cultures of statistical organizations; the costs of interpretation in terms of the reduced amount of content covered and doubts on accuracy and precision; the enthusiasm of the audience; the lack of a basic understanding in some senior managers of the need for management training; and the problems transferring training knowledge and skills over to assisted organizations that lack experienced trainers. The authors felt that practitioners would benefit from the results of further research into the many influences on organizational cultures and the impact of training through interpreters.

To conclude, the case study produced evidence from the experiences of a small international HRD provider to support the practical utility of international HRD theories, and illustrated how those theories can be used to suggest improvements to international HRD practice. The evidence also identified areas where further research would be useful to practitioners.

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Management and Career Development in the UK in Practice

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Longitudinal data on changes in UK management and career development (MCD) since 1987 are presented, and an open systems model of MCD in the UK discussed. The determinants of the amount of in-company management training, its impact on the organization, and the degree to which it has achieved its objectives are identified as well as the determinants of the priority given to MCD. Evidence is also presented of the changing roles and responsibilities in managerial career development.

Keywords: Managerial, Career, UK

In 1986 and 1987, three influential reports into the education, training and development of British managers were published, each identifying major weaknesses in the system of management development in the UK, especially in comparison with its major competitors (Mangham and Silver 1986, Constable and McCormick 1987, Handy 1987). Implications for Britain's economic efficiency and relative economic decline in the 20th Century were noted, and an ambitious agenda for improving the management development system in the UK developed. However, despite a plethora of Government reports and initiatives (eg National Training Targets, National and Scottish Vocational Qualifications, Investors in People) and several small - scale studies, we lack a picture of the current state of play in management and career development (MCD) in the UK a decade on from these reports, and whether the quantity and quality of MCD has improved. We also lack a theoretical framework, based on empirical research, as to the organizational processes by which MCD takes place in organizations. This paper seeks to remedy this deficiency by providing useful longitudinal data on changes in British MCD in the last 10 years, and by developing a model of organizational MCD which seeks to identify causal relationships among the elements of the MCD system.

Theoretical Framework

There are a number of explanations for Britain's poor progress in MCD up to the 1980's (eg. Thomson 1999). Factors often cited include the late split between ownership and control, the status of managers, the links between the technical and managerial functions, the slow development of a managerial professional identity, the assumptions that managers were born, not made, and the consequent lack of linkage between education and training for managers. A number of events in the 1980's led to a greater interest in MCD (eg the recession, company turn-arounds, increasing government interest, increasing University activity in MCD).

Some models of MCD have tried to relate it to corporate strategy, using concepts such as 'fit', integration or maturity (eg Guest 1997, Garavan 1991, Burgoyne 1988). However, there is a need to move beyond existing descriptive or prescriptive models by building on the analysis of Pettigrew et al (1988) which identified several factors as likely to stimulate HRD activity: the ability to manage increased complexity, internal labour markets with open career structures, HRD aiding recruitment, and a context where internal actors and systems favour an integrated approach to recruitment, learning and career development. Conversely, factors inhibiting HRD included preoccupation with immediate tasks, a lack of background qualifications, and training perceived as a low status activity. This paper presents an 'open systems' model of MCD identifying inputs (eg structure), processes (eg policy), outputs (eg quantity of training) and outcomes (eg impact on organization).

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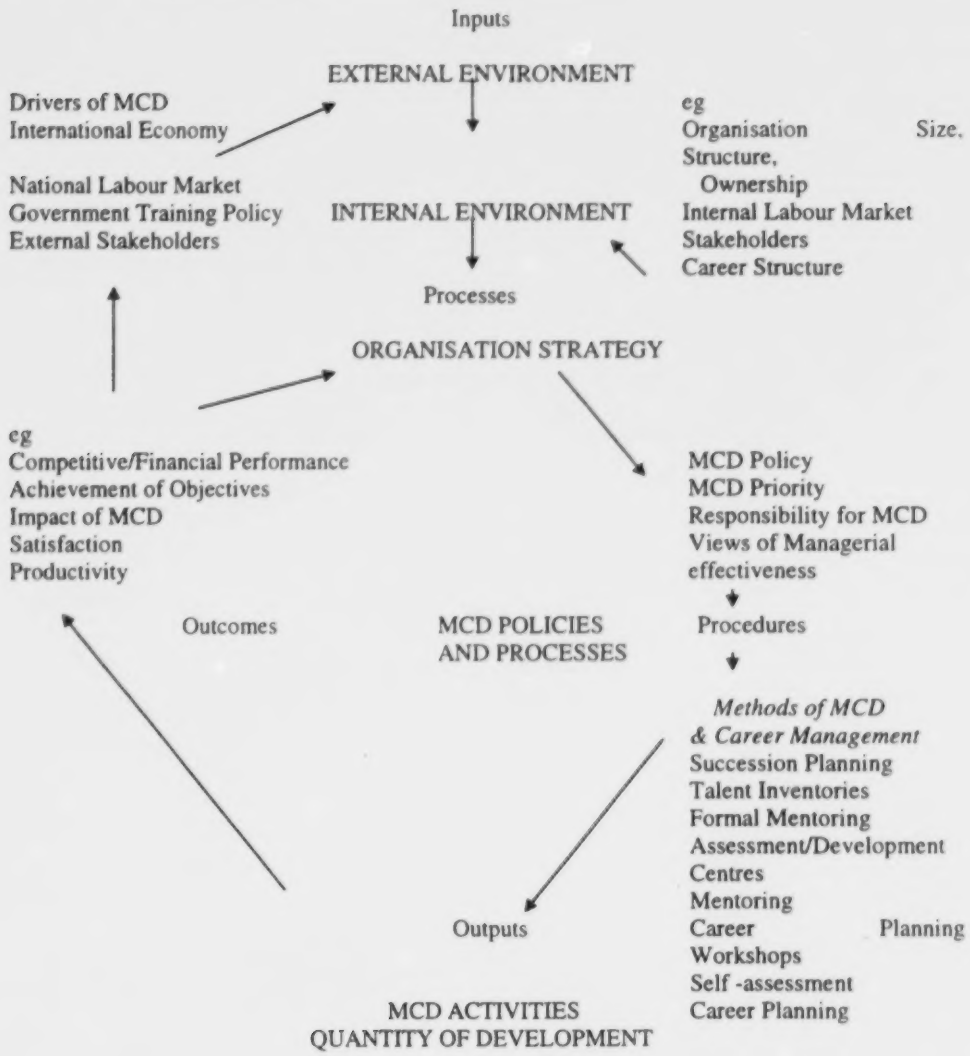
Figure 1. A Model of Management and Career Development



Research Questions

There are a number of questions which need to be asked about MCD in the UK, including:

1. How has MCD in the UK changed since 1986 / 1987?
2. What is the relative importance of environmental, structural and policy factors in explaining the quantity and impact of MCD activity in the UK?
3. What is the relative significance of the various 'drivers' of MCD in the UK?
4. Is there evidence that organizations in the UK have abandoned responsibility for managerial career development, making it an entirely individual responsibility? In other words, is there evidence of 'cellular' or 'protean' careers, as discussed by Allred et al (1996)?

Methodology

A series of large scale surveys of MCD in the UK have been conducted in 1996 and 1997, summarised in Thomson et al (1999). Here we will only report on :

(a) A 1996 telephone survey of 501 people responsible for MCD in their organization, structured for sector and size, lasting around 45 minutes and covering around 50 questions, employing many of the same questions used in Constable and McCormick (1987) and so providing valuable longitudinal data over a 10 year period.
(b) A 1997 postal questionnaire survey of c. 8000 MBA graduates drawn from membership of the Association of MBAs, using a structured sample of 500 drawn from a 17.4% response rate (n = 1398).

The primary data have already been published as research reports by the sponsoring bodies (theAssociation of MBAs 1998 and the Institute of Management 1997). This paper will present further analyses of these data, and also focus on their implications for career development in particular (Iles 1999).

Results

- *The AMBA Survey, (b)*

Respondents to the AMBA study (Association of MBAs 1997) in general reported: low levels of satisfaction with organizational MCD, but much on-going personal MCD at all levels. Much was outside employer provision, using a wide range of learning methods, with external courses and experiential learning both rated more highly than internal courses. A great determination to pursue MCD, at all levels was reported, with respondents anticipating a variety of modes and sources, both structured and unstructured and primarily driven by the individual; MCD was seen as necessary to keep up to date in a changing environment and to broaden skills and respondents were willing to make considerable personal investments in time and money. There was a substantial demand for further MCD to be recognised, and widespread access was reported to personal development facilities but with only limited reading of managerial journals. Only a limited personal role in MCD vis - a - vis other managers was envisaged, but a considerable degree of personal mobility was reported. In terms of organizational MCD, respondents reported that considerable MCD was being undertaken even without a policy framework, as many organizations only offered weak policy frameworks (no written statement and a low priority given to MCD, with a low assumption of responsibility for it by the organization). Differences in MCD seemed more related to policy than structural circumstances, but MCD did not seem to fully reflect business strategy, though company strategy was however perceived to be the primary driver of MCD, and was associated with the presence of 'strong' MCD policies. MCD generally was seen to have failed to meet its objectives or to have a positive impact on the organization.

- *The Company Survey, (a)*

Company survey respondents took a more positive view of MCD in organizations than individual managers, reporting that priority given to MCD had increased significantly compared to 10 years ago, and was expected to increase still more. Most companies were now involved in MCD, with only 4% doing no training, compared to 50% in 1987, whilst the amount of formal training carried out averaged c. 5.5 days per manager per year, compared to the 3.1 days estimated for 1987, and the 7.3 days anticipated in the forseeable future. The balance of responsibility for MCD was now seen as involving a partnership between the individual and the company, not as the responsibility of either party alone. The main drivers of MCD were perceived to be strategic, not operational or external, but appraisal was seen to be the main trigger for individual development, and much MCD seemed tactical and short - term. MCD activity appeared to range across all levels of management, was not just reserved for high - fliers, but was most emphasised at junior managerial levels. A reasonably equal balance was reported between formal and informal training activity, as was a considerable move forward in the language of managerial competence as compared to 1987, with better defined objectives for MCD. However, few major changes in training methods were anticipated, and post – experience education and training was now ranked higher than pre - experience education in terms of what makes a good manager compared to 1987, though inherent ability and job experience were still ranked higher, as they were in 1987. In general, MCD was judged to be achieving its objectives and having a positive impact on the organization.

The picture of MCD in the UK that emerges from these two studies seems more positive than it was in 1987, and MCD appears to be growing in significance, addressing research question 1. In order to address research

questions 2, 3 and 4 and to test the model of MCD presented in Figure 1, further analyses have been carried out on the primary data collected from the company telephone survey, (Thomson et al 1998). The main dependent variable analysed here is the output variable of amount of training, as measured in days per manager per year. Each variable was tested separately, and the clusters of variables were also tested for their collective impact. Table 1 presents results from the clusters of variables only.

Table 1
Determinants of the Outputs of Training From External, Internal, Policy and Career Clusters

R^2	0.201
adjusted R^2	0.174
DF	14
Listing of variables	
Beta (sig B)	Beta
Regressor set : external	0.15***
Regressor set : internal	0.107*
Regressor set : policy	0.412***
Regressor set : career	0.047

* $p < 0.05$ **$p < 0.01$ ***$p < 0.001$
(Adapted from Thomson et al (1998), p98)

Regression analysis shows that the policy variables (existence of a policy statement, priority given to MCD, organizational responsibility for MCD, and views on what contributes to the development of a good manager) contribute much more strongly than external or internal structural variables or career variables to explaining variance, in that order. Of the policy variables, priority given to MCD emerged most strongly, and policy variables also most strongly predicted amount of training anticipated in the future. Priority given to MCD again emerged as the most important single variable here, along with internal variables. Satisfaction with the amount of training provided was even more strongly predicted by the policy variables, along with the internal variables. Only three perceived drivers of MCD, out of fifteen variables selected from suggestions of a panel of experts and rated by respondents in terms of importance on a 1 - 10 scale (National Vocational Qualifications, competitive activity and demand from managers), predicted the amount of training undertaken (Table 2).

Table 2
Amount of Training Related to Perceived Drivers

R^2	0.168
adjusted R^2	0.135
DF	16

Listing of Variables	*Beta*	*Mean (S.E.)* 1 - 10 scale
Strategies	0.097	7.21 (0.09)
Structural Change	0.063	6.25 (0.10)
Cost of MCD	- 0.087	5.07 (0.10)
Support of Board	- 0.088	6.84 (0.10)
Management demand	- 0.113*	5.89 (0.08)
Company Culture	- 0.017	6.38 (0.09)
Individual ability to do job	0.063	6.60 (0.08)
Individual potential to progress	- 0.038	6.36 (0.09)
Staff retention	0.038	5.58 (0.10)
Career development	0.119	5.98 (0.09)
Staff motivation	0.060	6.02 (0.09)
Business efficiency	0.070	7.23 (0.08)
Competitive activity	0.129*	5.40 (0.12)
Customers	- 0.030	6.36 (0.11)
Vocational Qualifications	0.130*	3.49 (0.11)
Investors in People	0.010	4.54 (0.14)

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$
(Adapted from Thomson et al 1998, p. 99).

Priority given to MCD also emerged as the dominant variable in terms of predicting the extent to which MCD objectives were achieved and the perceived impact of MCD, the outcome variables in figure 1 (both rated on a 1 - 10 scale, Table 3).

Table 3

Influencing Variables on Achievement of Objectives and Impact on Organization (Outcome Variables)

	Achievement of Objectives	Impact on Organization
R^2	0.255	0.308
adjusted R^2	0.249	0.302
DF	4	4
Listing of variables	Beta	Beta
Amount of Training	0.156***	0.099*
Formal / Informal balance	- 0.009	- 0.027
Priority given to MCD	0.379***	0.436***
Responsibility for career	0.123**	0.184***

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$
(Adapted from Thomson et al 1998, p101)

Company responsibility for career development was however interestingly also strongly predictive of positive impact and achievement. The amount of training carried out predicted both whether MCD achieved its objectives and whether it had a strong impact on the organisation. A further set of analyses was undertaken to explore what

predicted the policy variables, including priority given to MCD. Priority given to MCD as a dependent variable was predicted by the career variables in particular (career structure, upward progress, and existence of fast - track, Table 4).

Table 4

Priority given to MCD in relation to external, internal and career clusters of variables.

R^2	0.155
adjusted R^2	0.149
DF	12
Listing of variables	Beta
Regressor set : internal	0.146***
Regressor set : external	0.190***
Regressor set : career	0.255***

* $p < 0.05$ **$p < 0.01$ ***$p < 0.001$
(Adapted from Thomson et al 1998, p102)

However, the strongest predictors in terms of individual variables were the existence of a separate budget for MCD and non - British ownership of the company. The existence of a policy statement for MCD was strongly associated with the drivers of Investors in People, staff retention, support of the Board, and the importance of strategic considerations (Table 5).

Table 5

Existence of Policy Statement Related to Perceived Drivers

R^2	0.158
adjusted R^2	0.126
DF	16
Listing of variables	Beta
Strategy	- 0.201***
Structural Change	0.049
Cost of MCD	- 0.009
Support of Board	- 0.163**
Management demand	- 0.030
Company culture	- 0.057
Individual ability to do job	- 0.013
Individual potential to progress	0.059
Staff retention	0.134*
Career development	- 0.126
Staff motivation	0.020
Business efficiency	0.089
Competitive activity	0.004
Customers	- 0.048
Vocational Qualifications	- 0.017
Investors in People	- 0.192

*$p < 0.05$ ** $p < 0.01$ *** $p < 0.001$
(Adapted from Thomson et al 1998, p. 103)

Implications for Managerial Career Development

In terms of research question 4, analysis of the two surveys does not suggest that the extreme views of the 'career is dead' school can be entirely supported. If the 'career is dead' school were accurate in their view of what is happening to managerial careers, we might expect the following to be reported from individuals and organizations in the two surveys:

1. A decline in the use of career management techniques, alongside a rise in the use of career planning techniques, as depicted in figure 1.
2. A decline in those features characteristic of 'relational'/employment security contracts, such as long-term planning and diffuse obligations alongside a rise in those features associated with 'transactional' contracts, such as short time horizons and specific obligations (Iles 1999).
3. A rise in behaviour characteristic of 'career resilient' managers, such as moving quickly, showing commitment to life-long learning, taking responsibility for career development, continuing commitment to the organization, being resistant to career disruptions, showing flexibility, and displaying evidence of being networked and connected (Iles 1997).
4. A rise in 'cellular' or 'protean' career behaviours, with the individual, not the organization, taking responsibility for career development (Allred et al 1996).

1. The AMBA Study, Study b.

With the usual caveats over representativeness, this study does seem to show some evidence of 'resilient' behaviours and the use of career planning techniques by AMBA members - perhaps not surprising, given the nature of a sample highly committed to education, qualifications and personal and career development, and one in which we might expect to detect the first glimmerings of 'cellular' behaviour (Allred et al 1996). Respondents seem clearly focussed in their commitment to continuous professional development; they seem clearly networked and connected in their membership of professional associations; and above all perhaps career resilient in their commitment to life - long learning, as indicated by their responses to what makes a good manager and their aspirations to continuous development. However, there is some indication that they have not turned their backs entirely on organizational support in a purely 'cellular' or 'transactional' way. They still see the value of in-company training, albeit with a low opinion of what they have experienced. There is some indication that they see career development as moving towards a middle position, where responsibility for career development is shared between employee and employer. We might characterise this position as a 'partnership' model, and infer that the psychological contract of the AMBA respondents includes the provision of in-company training. However, this is in many cases either an unfulfilled promise, or respondents are often disappointed in the quality or relevance of what they are receiving.

Other indications of 'boundaryless,' if not 'cellular,' careers are the findings that only a minority of respondents report being appointed for a 'career' (perhaps evidence of short-term transactional contracts?), and that respondents had on average worked in 4.2 previous organizations, crossing various categories of size, sector, and employment status. In addition, they anticipated moving frequently in the future. Their overwhelming intention to pursue more MCD, driven primarily by the individual as a means of keeping up-to-date and to develop broader skills and supported by a willingness to make substantial personal commitments of time and money, is almost a text-book definition of the flexible, life-long learning, commited, career-resilient manager.

On the other hand, many managers, (especially those in large companies with a clear policy statement on MCD, where the company takes responsibility for it and where MCD is perceived to have a positive impact and to be experienced as satisfying by recipients) reported the existence of planned career structures and succession planning practices. This indicates some continuing company responsibility for career development, perhaps characteristic of a 'partnership' model as a matter of strategic choice by the company.

2. The Company Study, Study a.

The company study gives further support to the widespread emergence of a 'partnership' model of MCD in the face of the emergence of strong 'transactional' or 'resilient' behaviours and attitudes. Some company respondents indicated a strongly transactional, specific, short-term view of MCD. For example, many companies did not expect managers to stay with them, and appointed them for a job rather than a career. However, other reponses reveal a longer-term, even 'relational' focus, such as the operation of internal, rather than external labour markets, the widespread use of succession planning, the commitment to development of all managers whatever their age or

grade, the linking of development with appraisal, the expectation that many managers will spend their entire careers in the organization, and the acceptance that responsibility for MCD is to be shared equally between the individual and the organization.

In terms of the model depicted in Figure 1, it appears as if company responsibility for career development is highly predictive of MCD having a positive impact on the organization. Career variables also predicted whether the organization gave priority to MCD, especially the presence of career structures, upward progress, and the existence of fast-track career management systems. Thus it appears that if UK companies do take responsibility for managerial careers, then this taking responsibility is associated both with relatively high priority given to MCD and with MCD having a positive impact on the organization. Priority given to MCD is in turn associated with the amount of training actually carried out by companies and with the amount of training anticipated to be carried out in the future, as well as with satisfaction with the training carried out and with judgements of whether training had achieved its objectives.

It appears that though many UK managers are taking responsibility for their own career development in ways resonant of 'transactional', 'cellular' and 'resilient' managers, especially in their commitment to career planning and to continuous professional development and networking, this has not meant that organizations have simply abandoned responsibility for career development. Iles (1997) argues in favour of 'sustainable' career development, where fostering resilience is seen as in the interests of both organization and employee, and where partnership between the parties involves commitments and entitlements on both sides. These might include the individual offering high performance, life-long learning, flexibility and commitment in return for development, challenge, and enhanced marketability and employability. The organization may therefore need to provide continuing support in the form of opportunities for self-assessment, benchmarking of skills, and continuous development as well as lateral and other moves, communication on strategic direction and changes, the training of managers as career coaches and counsellors, and the provision of career and learning resource centres. Rather than seeing a move from purely 'relational' to purely 'transactional' contracts, we may see the emergence of a diversity of contracts, mixing elements of 'transactional' contracts such as high pay for high performance and the assessment of goals and the achievement targets alongside aspects of 'relational' contracts, such as a commitment to internal labour markets and to the long-term development of managers.

Limitations

The research conducted clearly has a number of limitations. It was not possible to ascertain how far the sampling procedure for the AMBA study reflected the total membership, due to recording limitations. Respondents are likely to show greater interest in MCD than non - respondents, and AMBA members neither reflect the views of all managers or even of all MBAs (a highly aspirational group). In many cases, company and AMBA respondents are probably giving impressionistic answers, lacking access to relevant records. Many organisations kept few records, and a 'corporate' view may have been ascertained. Amount of training is used as the output variable, rather than perhaps more meaningful but harder to measure variables like numbers trained with appropriate skills and competencies. Outcomes are measured in terms of perceived impact and achievement of objectives, not value - added or contribution to organisational performance. There are many other outputs, outcomes and drivers of relevance to assessing the impact of MCD than are measured in this study. In addition, informal process of MCD have been neglected in favour of a concentration on formal processes only. Thus the study must be regarded as a first step in developing a model of MCD, but goes some way to address the research questions.

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7.21

Information and Feedback Seeking in U.S. and British Human Resources Development and Training Settings

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This survey-based study investigated information and feedback seeking behavior in U.S. and British Human Resource Development and training settings. It involved some 400 participants at two U.S. and 3 British universities and government agencies. Using self- and other-rating forms, the results indicated differences in perception of teaching styles and source, frequency, and usefulness of information regarding performance feedback and learning objectives. The study suggests that adult learners self-regulate in learning situations to a greater degree than instructors anticipate. The study has implications for the education and training of HRD instructors and trainers and adds to the knowledge base of instructional theory.

Keywords: Feedback, Training, Instructional Theory

This study investigated a series of research questions related to information and feedback seeking (FBS) behaviors of participants in Human Resources (HR) education and training. Feedback research has been prevalent in many social science fields and is considered a core construct in areas as diverse as instructional design, training, performance technology, systems engineering, and job design. An informal survey of current HRD journals, however, has found very few empirical studies related to the topic. While the general effectiveness of feedback appears unquestioned, there is a need to explore the topic anew and, especially, from an international perspective. Further, most of the existing research has focused on the trainer or instructor, treating the trainee as a relatively passive recipient of such feedback. This study takes a very focused look at the role of the training participant in actively seeking information about his/her learning requirements and actual performance during training.

Overview of the Literature

Feedback has been the focus of research by a large number of researchers in the fields of education, psychology, and organization behavior over the past 100 years (Brinko, 1993; Kluger & DeNisi, 1996). Feedback has been conceptualized as a "special case of the general communication process in which some sender ...conveys a message...to a recipient" (Ilgen, Fisher, & Taylor, 1979, p. 350) related to some aspect of the recipient's behavior. In the organizational context, feedback is most frequently related to performance and consists of evaluative statements about to the "effectiveness of one's work behavior" (Taylor, Fisher, & Ilgen, 1984, p. 82) and in particular about the results of past behavior (Van Dyne, 1992).

Feedback research originated in classic behaviorism and stimulus-response theory (Annett, 1969) and, more recently, cybernetics or control theory where knowledge of the results (KR) of one's behavior is seen as useful in regulating subsequent action. Feedback is seen as crucial for the functioning, maintenance, and adaptation of social systems, whether at the individual, group, organization, or societal levels because it provides information about the system's current state compared to some standard (Taylor, Fisher, & Ilgen, 1984). Without feedback, goal attainment would be improbable and action haphazard and random. Feedback is generally considered to improve performance and thus constitutes an important organizational and individual resource (Ashford & Cummings, 1985; Campbell & Campbell, 1988). A recent meta-analysis of feedback research by Kluger and DeNisi (1996), however, revealed important exceptions to the widely shared assumption that feedback consistently improves performance. Feedback interventions (FI), according to these authors, "have highly variable effects on performance, such that in some conditions FIs improve performance, in other conditions FIs have no apparent effects on performance, and in yet others FIs debilitate performance" (p. 254). Most of these moderating conditions are poorly understood and point to the need for continued research efforts on feedback despite the long history of feedback research. Moreover, recent reviews (for example Kluger & DeNisi, 1996; and Van Dyne, 1992) emphasized the

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multidimensional and multipurposive character of the construct and have called for renewed research efforts to deepen our understanding of this important topic.

The concept of feedback is closely linked to the notion of learning and therefore critical to the field of Human Resource Development. In a behavioristic frame, feedback provides information about the appropriateness of various courses of action in a trial-and-error mode. Leaders in organizations provide employees cues that reinforce or extinguish certain behaviors through a variety of rewards and sanctions, such as raises, promotions, desirable job assignments, and positive or negative performance evaluations. Successful training programs incorporate feedback as an instructional design element (Goldstein, 1993; Kowitz & Smith, 1985; Viau & Clark, 1987) to increase learning during training and increase the transfer of training (Schoenfeldt, 1996). A large number of research studies have addressed feedback in training settings. Most of these studies are experimental in nature and have addressed issues as diverse as the effects of feedback on self-efficacy related to the training task (Karl, O'Leary-Kelly, & Martocchio, 1993), transfer to training (Phye, 1991; Schroth, 1997a; Schroth, 1997b), achievement of training outcomes and motivation (Quinones, 1995), attitudes toward the training content and group members in cooperative teams (Archer-Kath, Johnson, & Johnson, 1994), and the effects of feedback during training for dangerous task performance (Kleinan, 1988).

Consequently, a voluminous literature exists related to the practice of using feedback during the instructional process to improve training and education. Among the more recent journal publications are guidelines for industry trainers (Viau & Clark, 1987), for supervisors providing in-service staff training (Parsons & Reid, 1995), and for college and university instructors (Dunkins & Precians, 1992; Brinko, 1993).

Most of the research, however, focuses on the antecedents, processes, and outcomes of providing feedback, while comparatively little attention has focused on the issue of information and feedback seeking. The shift from feedback giving to feedback seeking behavior (FSB) constitutes a conceptual and paradigmatic shift in focus that has renewed vigor and interest in an old concept. Rather than viewing the employee as a passive recipient of feedback provided by others, the FSB perspective posits that individuals are active participants who seek out information in the organizational context from a variety of sources on a frequent basis. In this context, feedback is viewed as a valuable information resource for individuals who actively monitor their environment for cues related to various goals. Given the open systems nature of organizations (Katz & Kahn, 1967) characterized by equifinality (more than one possible way to attain a goal) and equivocality (competing goals with equal valence), individuals in work environments are flooded with information and often experience uncertainty about what behaviors are appropriate and what goals to pursue. Role and goal uncertainty, ambiguity, and conflict are especially characteristic when individuals enter organizations as new employees; are transferred, promoted, or begin new assignments; or during times of organizational change (Ashford, 1989). Individuals at all levels of an organization, therefore, engage in frequent self-monitoring and seek information from the environment in order to reduce uncertainty, decide toward which goals to allocate their efforts and time, and make judgments about their own competence (Ashford, 1989; Ashford & Cummings, 1983). Several monitoring strategies are available, ranging from implicit (such as vicariously learning from the consequences of a colleague's action) to explicit (such as asking one's superior for direct feedback on a project.) Each strategy carries specific costs in terms of the effort required, the risk involved, and the amount and type of inference necessary to obtain the desired information; thus individuals will seek information if "the message reward value exceeds the expenditures incurred in obtaining it" (Ashford & Cummings, 1983, p. 387.)

The FBS perspective is built upon the assumptions that individuals self-regulate their behaviors and are actively involved in meaning-making. The FSB literature, therefore, takes its theoretical roots from control theory (as does the traditional feedback literature), but also symbolic interactionism (Berger & Luckman, 1966) with its emphasis on the individual interpretations and construction of reality. "Thus, individuals do not respond directly and instinctively to events, but rather respond in terms of their interpretations of those events" (Ashford, 1989, p. 143.) The perspective responds to the call for a more active and comprehensive view of employee behavior, rather than the relatively passive view granted to individuals in the behavioral sciences (Brief & Aldag, 1981). It also begins to address some the call for increased research from the employees' perspectives raised by Bjorquist and Lewis (1994).

FBS has personality- and situation-related antecedents. At the individual level it is related to a person's tolerance for ambiguity, and it plays an important role in managing the impression an individual wishes to convey in work-related situations. Performers, in particular, are often less likely to seek feedback because of fear to appear less than competent (Ashford & Northcraft, 1992). Vandewalle (1995) further suggested that the frequency, type, timing, and target of feedback seeking behavior were influenced by an individual's goal orientation (Dweck, 1986; Dweck & Leggett, 1988). Individuals with a learning goal orientation (focused on improving their abilities, acquiring new skills, and mastering new situations) will seek feedback more frequently, more immediately, and from an expert source, than individuals with a performance goal orientation. Those intent on demonstrating and

validating the adequacy of their ability by seeking favorable judgments and avoiding negative judgments related to their abilities will seek feedback less frequently, with longer delay, and from a source who possesses organizational power.

Situation- and context-based influences on feedback seeking behaviors include cultural norms and characteristics of the feedback source, the nature of the feedback that was obtained, and the nature of the relationship between the feedback seeker and the source. Technology can play an important role in this: as Ang, Cummings, Straub, and Early (1993) found, individuals in computer-mediated feedback environments sought feedback more frequently than individuals in face-to-face feedback environments, especially when the feedback giver was perceived to be in a bad mood.

Personal outcomes of FBS include an increase in the amount and rate of concept learning (Schroth, 1997a, 1997b). Morrison (1993a, 1993b) demonstrated the linkage between frequency of information seeking and overall satisfaction, intention to stay with an organization, and job performance among newcomers to an organization. Feedback seeking, as Madzar (1995) pointed, is of value to employees and organizations because it "reduces uncertainty about behaviors as well as about how these behaviors are evaluated by others" (p. 338). FBS constitutes a crucial aspect of employees' self-regulation framework, it reduces time-on-task, and is positively related to goal attainment.

The implications of FBS research for HRD practice have been summarized by Madzar (1995): since feedback is an important resource for individuals and organizations, opportunities to seek feedback should be enhanced. This can be accomplished through training (stressing the importance of FBS, encouraging process as well as outcome feedback seeking, and reducing the personal risk involved in seeking feedback through role-modeling) and through organization development (developing technologies that facilitate the feedback process, creating a culture where feedback seeking is encouraged, and changing communication norms and expectations.)

Purpose of the Study

The focus of this study, then, is to examine the process of feedback seeking in management training and HRD university instruction settings in the United States, Britain, and selected Asian countries. By using management training and HRD university instruction settings for this field-based research, this study expands the body of existing FBS research into an area of central concern to HRD, provides an international perspective, and provides an extension of traditional research focused on feedback giving in training and education.

Management and leadership training constitute the second largest category of training provided in the United States (Training, 1997). Over 85% of all U.S. organization with more than 100 employees report to conduct some form of management, leadership, or supervisory training. The extent of management training has been attributed to the flattening of organizations and the increase in job roles at all levels of an organization. Management skills are seen as critical for an organization's success, and research findings have confirmed their important role for a firm's performance (Gordon & DiTomasio, 1992; Howell & Avolio, 1993; Yammarino, Spangler, & Bass, 1993).

Management training is appropriate for the study of FSB, in particular to the extent that it presents a novel situation for trainees who are advancing in an organization. In this situation, new behaviors, skills, knowledge, and attitudes are introduced which are of importance to employees who will be assuming new levels of responsibility in their organization. Management training often serves as a rite of initiation to employees and signals their impending enhanced status and responsibility in an organization. In particular for newly appointed managers and supervisors, the behaviors learned in management training are important because they represent those skills they will need in order to succeed in their new roles.

Similarly, HRD is among the fasted growing areas within schools of education in the United States. HRD graduate courses are attended by full-time and part-time students who often work in professional positions in business and industry. Often, courses are taught at night to accommodate the schedules of working adults and by instructors with extensive business and industry experience. These instructors are either practicing professionals themselves and teach on a part time basis, or have had extensive business and industry experience themselves prior to joining a university faculty. Moreover, many HRD faculty continue to be actively involved in service and consulting work and maintain active professional practices.

Whether in management training situations or in HRD university instruction, students prepare for future professional roles, and learning, in this situation, represents an important performance criterion (Martocchio & Dulebohn, 1994). Students and trainees (hereafter: students) can be expected to engage in feedback seeking behavior to obtain information about the training and learning objectives and to seek feedback to assess their performance relative to the objectives.

Research Questions and Hypotheses

The research questions for this study were as follows:

1) What sources of information regarding learning requirements and feedback about their performance do students use? How useful are the information and feedback they receive? How frequently do training participants use each source during a training event?
2) What individual level variables influence the amount, frequency, and source of information and feedback seeking? Does the amount of variance explained vary by culture?
3) What contextual and instructor-related variables influence the amount, frequency, and source of information and feedback seeking? Does the amount of variance explained vary by culture?
4) How is the information and feedback-seeking behavior related to perceived relevance of the course and intention to transfer the learning?

Methodology

This was a non-experimental, survey-based study using a post-hoc research design using multiple samples from the U.K. and the U.S. The study used volunteer samples from four institutions offering graduate and professional education and training in HRD and from one organizations conducting management development training.

At each institutions, volunteers from among the teaching faculty were recruited and asked to participate in this study by administering a 2o-minute written questionnaire to volunteers from among the students currently enrolled in their HRD courses, to complete a 10-minute questionnaire on their own teaching style.

The data collection for this study consisted of two written surveys, one each to be completed by the students and the instructors. The student survey was a 50-item instrument developed from existing and psychometrically proven scales. It consisted of Likert-type items, short scenarios, and ranking questions. Pilot tests had established that the instrument takes an average of less than 20 minutes to complete. The instructor questionnaire was a shortened and parallel version of the student questionnaire with 40 questions that took less than 15 minutes to complete. All scales used in the two instruments had been tested in previous research and yielded acceptable measures of validity and reliability. The questionnaires were completed anonymously and confidentially.

Results

The surveys were administered in the summer and fall of 1998. 299 of the initial sample of 383 students in 20 courses participated in the survey, for an overall response rate of 78%. In addition, 24 trainers and instructors returned completed surveys. Table 1 shows the demographic information for the sample. Chi-square tests established no differences in gender or age among participants from the five institutions. There were differences, however, by education and professional experience.

Table 2 shows the descriptive statistics, reliability indices and zero-order correlations among the variables in this study. All scales showed sufficient internal reliability and were minimally intercorrelated, suggesting independence of the constructs measured.

The results show that, as a group, students rated their instructors highest on their ability to provide inspirational motivation and to act as role models by acting in a charismatic manner. Lower scores were given to the instructors' ability to react to individual needs and, surprisingly, to provide intellectually challenging content. Students ranked about in the middle on the individualism/collectivism scale and on the learning versus performance orientations. They reported comparatively lower levels of motivation to learn, intention to transfer the course material, and the perceived usefulness of the course material. They also reported average levels of ambiguity for tolerance. With respect to feedback and information seeking behavior, the results show higher average scores for seeking information about course and learning requirements than for obtaining feedback about their performance. They sought information about learning requirements primarily from the course assignments and their peers, followed by the instructors, and least from their own thoughts and feelings. In contrast, students used their own thoughts and feelings most often to obtain feedback about how well they were performing in the course, followed by the assignments and peers, and least from the instructors.

When comparing student scores to instructor perceptions, significant differences emerged. Overall, instructors overrated the degree to which they provided individual consideration to each student (instructor score:

4.26, rank 1 of 4; student score: 3.63, rank 4 of 4). They also overestimated their impact related to providing intellectually stimulating education and training. Instructors, further, underestimated the degree to which their students perceived them as acting in a charismatic manner.

Table 1

Response Rates and Demographic Characteristics

	U.S.			U.K.				Overall
	Univ1	Univ2	Total	Univ3	Univ4	Org1	Total	
Number of Courses	2	5	7	3	1	9	20	
Instructors	2	5	7	5	1	11	12	24
Initial Student Sample	98	75	173	81	9	120	210	383
Valid Responses	85	60	145	51	5	98	154	299
Response Rate	87%	80%	84%	63%	56%	82%	73%	78%
Gender:								
Male	37%	30%	34%	22%	60%	40%	35%	34%
Female	63%	70%	66%	78%	40%	60%	65%	66%
Age: mean (s.d.)	24.32 (6.91)	31.22(10.6)	27.22 (9.32)	33.34 (7.22)	35.20 (4.66)	34.52 (8.71)	34.24 (8.21)	30.84 (9.24)
Education:								
< B.A.	0	13%		n/a	n/a	67%		30%
B.A.	73%	57%		n/a	n/a	24%		50%
M.A.	27%	30%		n/a	n/a	9%		20%
Prof. Experience								
Mean years (s.d.)	3.22 (6.41)	9.54 (7.81)		8.56 (7.22)	6.00 (2.45)	14.0 (8.5)		9.10 (8.35)

Table 2

Scale Descriptive Statistics and Zero-Order Correlations < .05 (N=299)

Scale	Mean (s.d.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.Referent/Constituents	3.01 (.59)	[.84]															
2. Referent/ System	3.63 (.72)	.39*	[.76]														
3. Referent/Self	3.19 (.80)	.51*	.38*	[.81]													
4.Feedback/Constituents	2.42 (.58)	.60*			[.81]												
5. Feedback/System	2.88 (.97)		.49*	.37*	.71*	[.86]											
6. Feedback/Self	3.05 (.90)		.31*	.57*		.52*	[.78]										
7. Charisma	4.01 (.58)		.39*			.28*	.26*	[.74]									
8. Inspirational Motivation	4.13 (.66)		.17*	.12*	.56*	.15*		.67*	[.68]								
9. Intellectual Stimulation	3.80 (.72)		.41*	.21*		.25*		.75*	.52*	[.72]							
10. Individual Consideration	3.63 (.57)		.34*	.28*		.21*	.17*	.65*	.61*	.72*	[.76]						
11. Goal Orientation	.48 (.50)											[.65]					
12. Tolerance for Ambiguity	2.45 (.69)								-.13*			-.38*	[.72]				
13. Cultural Value	.67 (.41)		-.12*										-.16*	[.83]			
14. Motivation to learn 4)	2.89 (1.09)		-.18*					-.22*	-.14*	-.18*	-.25*	-.17*			[.86]		
15. Motivation to Transfer	2.89 (1.05)		-.20*					-.39*	-.25*	-.28*	-.35*	-.18*			.80*	[.83]	
16. Perceived Utility	2.72 (1.36)		-.23*					-.31*		-.19*	-.27*	-.18*			.88*	.79*	[.97]

Note: *=p<.05, **=p<.01, Diagonals: Chronbach's alpha

Instructors further overestimated the amount and source of students' information and feedback seeking behaviors. They thought of themselves as the most important source for information on learning requirements and feedback about learning performance. Table 3 shows student and instructor scores.

Table 3

Student and Instructor Scores on Instructor and Feedback/Information Seeking Scales

Scale	Instructors (N=24)	Students (N=299)
Charisma	3.78 (.51)	4.01 (.58)
Individual Consideration	4.26 (.48)	3.63 (.87)
Inspirational Motivation	4.15 (.49)	4.13 (.66)
Intellectual Stimulation	4.03 (.48)	3.80 (.72)
Feedback Constituencies	3.60 (.46)	2.78 (.50)
Feedback System	3.22 (.53)	2.88 (.97)
Feedback Self	3.68 (.70)	3.05 (.90)
Referent Constituents	3.85 (.49)	3.23 (.42)
Referent Systems	3.87 (.62)	3.63 (.72)
Referent Self	3.74 (.68)	3.19 (.80)

Instructor-related variables played a major role in determining the amount of information students sought. Individual Consideration, for example, accounted for 15 percent of the variance in seeking information about learning requirements from course assignments and peers. Intellectual Stimulation accounted for 26 percent of the variance in the amount of information sought. In contrast, students' perceptions of the value of the course determined how much feedback about their performance they sought. When students found the course material relevant, they sought more information about their performance and did so more frequently. Where they were motivated to learn the course material, they sought more performance feedback from their own thoughts and feelings.

Finally, regression analyses were conducted to determine which factors contributed to the three outcome variables: motivation to learn, perceived utility, and intention to transfer. Almost one-half (47%) of the variance in Motivation to Learn was accounted for by four variables: Intention to Transfer (33%), Perceived Utility (6%), Usefulness of Information about Learning Requirements (6%), and Amount of Feedback from Assignments and Peers (3%). 44% of Perceived Utility was accounted for by Intention to Transfer (33%), Frequency of Information about Learning Requirements (6%), and Motivation to Learn (5%).

Conclusions

This study sought to investigate the relationship between instructor and student-related variables to information and feedback seeking behavior in HRD education and training situations. Obtaining survey data from 20 different HRD courses, in five different university and government agency settings and in the US and the UK, the survey resulted in a number of insights related to the research questions.

The results of this study indicate empirical evidence that adult learners use their own thoughts and feelings as a primary source for obtaining feedback about their performance in a learning situation. The second most frequently used source is assignments, with the instructor being used least often. With respect to learning requirements, students used assignments and peer most often, followed by the instructor and their own thoughts and feelings.

Instructors tended to overestimate the amount, frequency, and usefulness of performance feedback and information about learning requirements that students were seeking. Students sought considerably less feedback and performance information than their instructors assumed they did. Also, instructors tended to overestimate their own role in providing feedback.

Instructors also overestimated the amount of individual consideration and intellectual stimulation they were providing: students reported receiving considerably less individual attention and intellectually stimulating training and education than their instructors perceived. On the other hand, instructors tended to underestimate the degree to which their students perceived them as charismatic.

Instructional styles influence the feedback and information seeking behavior of students. Individual

consideration and intellectual stimulation, in particular, explained a sizeable amount of the variance of both behaviors. In turn, student perception of the relevance of the course determined their level of performance feedback seeking.

Finally, the three outcome variables measured in this study were highly intercorrelated: students are motivated to learn the course material to the extent that they perceive it as relevant and intend to transfer it.

Interestingly, neither orientation toward individualism or collectivism, nor tolerance for ambiguity or learning orientation appeared to influence feedback and information seeking behavior. This finding is in contrast to previous studies.

The implications of this study extend to the practice of HRD training and education and the preparation of trainers and educators in the field. True to adult learning principles, adults appear to self-regulate their behavior to a larger degree than instructors are aware of. Instructors tend to overestimate their own roles and importance in providing feedback, paying personal attention to students, and conducting courses that challenge the students' minds. Given the premise that it is helpful for instructors to have an accurate picture of students' perception, instructors might be advised to revise their own expectations regarding students' behavior and obtain more frequent feedback about their students' opinion about their own teaching and training styles. Where trainers and educators pay attention to individuals' learning needs and challenge their assumptions and beliefs, students are more likely to seek information and feedback about the course and their performance. Lastly, students' motivation to learn appears to be influenced primarily by their perception of the relevance of the material and their intention to transfer the learning. Facilitating the transfer or, at least, increasing the likelihood that there is opportunity to apply the newly learned material at the work site, can, in turn, increase the students' motivation to learn. Transfer, it appears, should be considered prior to the course and not only upon completion of it.

This study was conducted in clearly defined settings: university HRD instruction and a series of management training courses. The fact that the study contained 20 sites and courses lends confidence to its findings. Clearly, however, there is a need to replicate the study in different settings and with different performance requirements to examine whether the findings are an artifact of the specific settings of this study or, in fact, can be found elsewhere. Further, a more detailed analysis by course is required to investigate what specific aspects of the 20 courses in this study contributed to the findings. Equally important will be to conduct longitudinal research to find whether and what kind of movement or chance in FBS behavior occurs.

Feedback and information seeking behaviors are complex, yet critical issues for HRD. As the learning requirements of adults in the workplace increase, so will our profession need to advance the research on learning for work. This study contributes to this agenda in a small way.

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Mentoring as a Tool for Faculty Development: Predicting Positive Outcomes for Mentors

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Mentoring programs have emerged in various organizations, from industrial to educational, for employee socialization and development purposes. Not all programs have experienced return on the investment. This study looked at the relationship between mentoring outcomes and mentoring activities as well as mentor and mentee characteristics. Female mentors reported greater benefits, as did those who served more psychosocial and vocational functions. Among mentees, only hours spent with one's mentor was a significant predictor of mentoring benefits.

Keywords: Mentoring, Faculty Improvement, Mentoring Programs

Mentoring promotes the professional and personal growth of the mentee through coaching, support, feedback and the sharing of information and is considered an invaluable development tool for those new to an organization or in early career stages (e.g., Bova, 1995; Chao, Walz, & Gardner, 1991; Dreher & Ash, 1990). Studies have shown generally positive consequences of mentoring programs for mentees, with relatively little focus on outcomes for mentors. This study looks at the mentor perspective on formal mentoring among faculty in higher education. A greater understanding of mentoring and mentoring outcomes would help to maximize the effectiveness of mentoring models, benefiting the faculty involved and the institutions employing the programs.

Mentoring in Business and Industry: Outcomes

In business, benefits of mentoring are most often monetary and positional. Mentees most often report greater salary as an outcome, as well as promotions, career advancements, and more internal mobility (e.g., Aryee, Wyatt, & Stone, 1996; Baugh, Lankau, & Scandura, 1996; Chao, 1997; Corzine, Buntzman, & Busch, 1994; Scandura & Schriesheim, 1994; Turban & Dougherty, 1994; Vincent & Seymour, 1995). Others cite the development of relationships, new information, receiving job-related help, and imparting knowledge to others (Allen, Poteet, & Burroughs, 1997).

Intrinsic benefits most often associated with being a mentor are job satisfaction and perceived career success for individuals, as well as more satisfaction in helping others, and new perspectives of a mentor's own situation (Allen, Poteet, & Burroughs, 1997; Ayree et al., 1996; Chao, 1997; Corzine et al., 1994; Mobley, Jaret, & Marsh, 1994; Ragins & Scandura, 1994; Scandura, 1997; Thibodeaux & Lowe, 1996; Turban & Dougherty, 1994). Companies using mentoring programs can also reap rewards, such as increased employee satisfaction and development (Berube, 1996; Hale, 1996; Scandura, 1997).

Some research suggests that mentoring can help women succeed in male-dominated organizations (Matsumoto, 1997), but overall gender effects in mentoring are unclear (Johnson & Scandura, 1994; Mobley, et al., 1994; Ragins & Scandura, 1994; Turban & Dougherty, 1994). The closeness of the relationship appears to be an important factor related to outcomes (Allen, Poteet, & Burroughs, 1997; Burke & McKeen, 1997; Heimann & Pittenger, 1996).

Effective communication skills, sincerity, motivation and past experience of a mentor have been shown to influence the effectiveness of mentoring (Aryee, Chay, & Chew, 1996; Mullen, 1994). Mentees show significantly higher needs for power and achievement than nonmentees, an internal locus of control, high self-monitoring, and high emotional stability (Fagenson, 1994; Turban & Dougherty, 1994).

Mentoring in Education: Outcomes

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Mentoring programs in academia have been widely viewed as beneficial (e.g., Bush & Coleman, 1995; Ganser, 1994; Rehrig, 1996; Southworth, 1995). Mentored instructors tend to have a better understanding of student needs, and their students show greater learning (Dembele, 1996; Freiberg, 1994; Van Ast, 1995). Mentoring enables professors to improve instructional materials, keep up-to-date on new technology and teaching, and to network with other faculty (Foote, 1996).

Mentored instructors report intrinsic benefits, such as mutual respect, trust, and emotional support from their mentors, and personal development (Abell, 1995; Ballantyne, 1995; Jordan, 1995; St. Clair, 1994). Campbell (1995) reported that mentees felt less of a need to seek help than nonmentees. According to Graham (1994), mentors were reminded of the value of their past experience and had an opportunity to examine themselves; mentees obtained insight into learning and working styles and were more confident. Although faculty mentoring programs in educational settings produce many benefits, they appear to more psychosocial than vocational (Majette-Daniels, 1993; Shumate, 1995).

Research on gender and mentoring in educational institutions has produced mixed results. Freitag (1995) concluded that males and females were equally likely to pursue mentoring relationships. Another study of female professors/mentees revealed less psychosocial support received as rank of the mentor increased, regardless of the mentor's gender, but more vocational activities (Struthers, 1995). Issues were indicated when both gender and race were analyzed together. Females from minority groups experienced compounded stereotypes and conflicts between culture and academic values (Bova, 1995; Shumate, 1995). Mentees with white, male mentors received higher annual compensation; white, male mentees were more likely to establish a relationship with white, male mentors (Dreher & Cox, 1996). Characteristics of the relationship may also influence outcomes. Some studies have suggested that informal relationships may be more beneficial than formal situations (Bainer & Didham, 1995; Tepper, 1995), and that more than one mentor per mentee may be important (Henderson & Welch, 1993; Orpen, 1995). According to Westhoff (1995), teachers who have been mentored feel more support and general awareness and information regarding procedures, whether the relationship is formal or informal.

Whereas, in business, individuals reported the extrinsic benefits of money or advancement, as well as intrinsic outcomes, the benefits described by those in education were almost entirely intrinsic. Some studies in education showed that mentees were gaining good psychosocial support, but less career-enhancement activities (e.g., Majette-Daniels, 1993; Shumate, 1995). The following objective was addressed in this study to increase understanding of faculty mentoring programs and how to maximize outcomes for mentors and their institutions:

Research Objective

To examine mentoring outcomes for mentors and their relationship with selected individual differences among mentors and mentoring relationship characteristics.

Method

Data Collection

The data used were obtained from participants in the faculty mentoring program at a large Midwestern university from 1993 to the present. Surveys were sent to 331 faculty members/mentoring participants at the university (165 mentors and 166 mentees). The overall response rate was 33% (n = 189). Mentors responded at a rate of 40% (n = 55); mentees responded at a rate of 37% (n = 52). Participants were told that a survey was being sent to their respective mentee or mentor and that all responses would be completely confidential. They were asked to complete the survey independently. The mentor and mentee surveys were parallel in form and content. A self-addressed, stamped envelope was provided for the return of the completed survey.

Measures

Predictors:Mentors were asked whether they had previous experience in a mentoring relationship. All respondents were asked about the length of the relationship and the number of hours per month spent with their partners. Participants were also asked to indicate their age, gender, partner's gender, and the number of years at the institution. Noe's (1988) 29-item scale was used to examine the extent to which the mentor was providing

psychosocial and vocational mentoring functions. Nine items were developed for this study to measure the use of mentoring activities to promote intended outcomes (e.g., "To what extent did you have regular meetings with your mentee?"). Both scales used a five-point, Likert response scale, ranging from "To a very small extent" to "To a very large extent." For the two multiple-item scales, single indices were obtained by averaging across the 29 items and 9 items respectively.

Dependent variable: Mullen's (1994) 21-item scale was used to measure benefits of being a mentor (e.g., "Indicate the extent to which you developed new ideas and innovative thinking as a result of this mentoring relationship"), with a five-point Likert response scale ranging from "To a very small extent" to "To a very large extent." A single index of mentor benefits was obtained by averaging across the items.

Data Analysis Strategy

Analyses included the computation of Cronbach's alphas as indices of scale internal consistency reliability; correlation coefficients indicating the degree of overlap between variables included in the study; and hierarchical regression equations to examine the relationships between mentor benefits and individual and relationship characteristics, including mentoring activities.

Results

Means, standard deviations, and correlation coefficients are shown in Table 1. Table 2 depict hierarchical regression analyses. Demographic characteristics of participants were as follows: 34% of mentors were female (n = 30); 49% of mentees were female (n = 49); mean age of mentors was 49.68 (n = 89); and mean age of mentees was 40.08 (n = 100). Mentors reported spending an average 8.38 hours per month with their mentees, while mentees reported 4.48 hours/month. 31% of mentors had been mentors in the past (n = 28).

The average mentor held a Ph.D. (or equivalent) and had been at their institution for 16.82 years. The average mentee held a Ph.D. (or equivalent) and had been at their institution for 5 years. The average mentor was a tenured full professor. The average mentee was an assistant professor. 29.57% of mentoring dyads (i.e., mentor and mentee) were cross-sex (n = 16). The male mentor/male mentee relationship was the most frequent type, and the female mentor/male mentee was the most infrequent type. The average mentoring relationship lasted 15.32 months.

Mentors

Mentors reported a mean level of 2.27 on the mentor benefits scale, indicating benefits in the range of "small extent" to "some extent." As shown by the correlation coefficients (see Table 1), mentor benefits were significantly related to: (1) the extent to which mentors engaged in mentoring activities to promote mentee outcomes ($r = .58$, $p < .01$); (2) the extent to which mentors seek feedback on their research from their mentees ($r = .45$, $p < .01$); (3) the extent to which mentors seek feedback on their teaching from their mentees ($r = .33$, $p < .05$); (4) mentor information seeking from their mentees ($r = .33$, $p < .05$); (5) mentor gender ($r = .48$, $p < .01$); and (6) serving psychosocial and vocational functions ($r = .68$, $p < .01$). Mentor benefits were not significantly correlated with mentor age; the gender mix of the relationship; the number of hours spent together; job satisfaction; or experience as a mentor in the past.

The results of the hierarchical regression analysis (see Table 2) indicate that only gender (beta = .30, $p < .05$, in step two) and mentoring functions (beta = .40, $p < .05$) significantly predicted mentor benefits. Age, gender composition, time spent together, having been a mentor before, and mentoring activities did not bear significant beta weights. Female mentors who served greater mentoring functions tended to report greater benefits of being a mentor.

Mentees

Overall, mentees indicated a mean response of 3.02, or a moderate level, on the mentoring functions scale, representing the extent to which mentees receive psychosocial and vocational functions from their mentors. Illustrated by the correlation coefficients (see Table 1), psychosocial and vocational functions were significantly related to mentoring ($r = .87$, $p < .01$); mentor benefits ($r = .64$, $p < .01$); gender composition of the relationship ($r = .28$, $p < .05$); and hours spent together ($r = .48$, $p < .01$). These correlations indicate that mentees experience more psychosocial and vocational outcomes when more structured mentoring activities are utilized. This suggests that

more structure to the relationship and preparation of mentors would positively impact outcomes for mentees. Further, mentees who reported receiving greater mentoring functions also reported spending more time with their mentors, perhaps indicating that mentors should be encouraged to spend ample time with their mentees.

The hierarchical multiple regression analysis resulted in a significant beta weight only for time spent together (beta = .32, $p < .05$, in step one). Mentee's age and gender, relationship gender composition, mentoring functions, and mentoring activities did not bear significant beta weights with the mentee data.

Discussion

It appears from these results that mentors who put more into the relationship tend to get more out of it. Mentoring functions significantly predicted mentoring benefits with the mentor data in both hierarchical equations. Disappointingly, mentoring activities did not bear a significant beta weight in either regression equation or for either mentors or mentees. This may be due to overlap with mentoring functions (i.e., multicollinearity), the items themselves, or some other methodological issue, because the correlation coefficient reflecting the relationship between mentoring activities and mentoring benefits was relatively large and significant with both mentor and mentee data. The fact that we have begun to quantitatively examine mentoring activities and their influence is a step that deserves to be taken further.

These findings also suggest that, for mentors, mentor benefits are not significantly associated with the mentor's age or having been a mentor before. For mentors, there was not a link between mentoring benefits and the amount of time spent with one's mentee, although among mentees hours spent together did predict mentoring benefits. And while mentor gender *was* related to mentoring benefits (mentor data), gender composition of the relationship did not have an influence. In this case, female mentors reported greater mentoring benefits, but the gender mix of the relationship did not seem to matter. The only other predictor that was significantly related to mentor benefits was mentoring functions, indicating that mentors who served more psychosocial and vocational mentoring functions reported greater benefits. Practical mentoring activities did not relate significantly to mentoring benefits among mentors or mentees in the regression equations, although they produced significant correlations. This suggests continuing to look at the influence of mentoring activities or strategies for promoting positive outcomes more systematically.

With the mentee data, only hours spent together was significantly predictive of mentor benefits. The mentees who spent more time with their mentors perceived greater benefits for their mentors.

As Kram (1985) has suggested, the mentoring relationships characterized by greater mentoring functions are the most beneficial for mentees and, may be beneficial for mentors as well. Perhaps for the mentors, "the more you put into something, the more you get out of it." Among these mentors, those who served vocational and psychosocial functions report greater benefits of being mentors. Future research should examine the influence of vocational and psychosocial (mentoring) functions separately as well as look at specific benefits of mentoring. Our study aggregated vocational and psychosocial functions into mentoring functions along with combining the various benefits of mentoring.

Encouragingly, mentors benefited whether they had experience as mentors or not and irrespective of the gender mix of the relationship. Age of the participants also appeared not to be a factor of concern in maximizing mentoring benefits. Activities used to serve mentoring functions, e.g., regularly scheduled meetings, were not related to mentoring benefits in this study as expected, at least not according to the regression analyses. The correlation coefficients suggest otherwise. This was a disappointing finding (i.e., the regression results) since, again, it was expected that what one "put into" the relationship was expected to be related to what one "got out of" the relationship. Methodological issues are likely a factor.

There were differences in the reportings of mentors and mentees on the same issues. The most interesting discrepancy found between mentor and mentee responses was the reported hours spent together. Mentors and mentees disagreed in terms of how much time they spent together (mentor mean = 6.13 hours per month; mentee mean = 4.00 hours per month). The need for greater explanation to participants regarding what constituted time spent together as mentor and mentee may be indicated. Time spent together significantly predicted mentoring benefits only among mentees, not among mentors. Benefiting from mentoring among mentors was not a function of how much time they spent with their mentees. For mentees, the two were linked. Further work should focus on this discrepancy and what it reflects.

This study is not without limitations, like most empirical studies. First, survey data were used, which may be subject to method bias. The limitations of such data should be noted. However, this was the only feasible means of data collection and two sources (mentors and mentees) were used in effort to avoid using a unilateral perspective.

Certainly, these are perceptions, but perceptual data was sought. Self-report with some mentee report was the most feasible approach for gathering perceptions from this sample.

Second, because of the largely preliminary nature of this study, several variables used were summary variables. The mentoring activities variable summarized nine items ranging from "To what extent did you have regular meetings with your mentee?" to "To what extent did you do research jointly with your mentee?" These items may be more meaningful in isolation. They should be examined separately in future work. Also, psychosocial and vocational mentoring functions were merged into mentoring functions. Although mentoring functions were a significant predictor of mentoring benefits in this study, it might be more useful in the future to separate the two. Third, only one educational institution was represented in this study, making the representativeness of the data of other institutions and the generalizability of the results to other settings questionable. Still, it offers some preliminary results and opens the door on these issues, hopefully leading to further work.

In conclusion, these data show that the mentors and mentees in this sample did perceive that they experience benefits of mentoring. Institutions with faculty mentoring programs may take heart at this. Readers are advised to be cautious in generalizing these findings beyond the institution examined. Future research needs to attempt to replicate and expand upon these findings in other academic and nonacademic settings. These results also hint that we may not need to be concerned with the gender mix of mentoring relationships when matching mentors to mentees. The fact that hours spent together related to benefits for mentees, but not mentors, also merits further attention to look at the reason(s) behind this finding.

Because some mentoring programs in organizations target assisting female employees, it is encouraging to see that the female mentors in this study benefited more, rather than less, than the male mentors. It would be interesting as well as useful to investigate why women did tend to benefit more in this sample. Finally, finding a significant relationship between serving mentoring functions and benefiting from mentoring is consistent with what many of us would suspect: That mentors who put more into the relationship also get more out of it. Certainly, this finding is worthy of continued examination.

The better we understand these relationships, the more likely we are to be able to maximize the positive outcomes. A greater understanding of mentoring should lead to greater value added from mentoring programs and, thus, greater justification for the investment organizations make in these programs. Overall, the results suggest there are positive outcomes for both the mentor and the mentee involved in this university mentoring program, particularly if the mentor serves the necessary functions.

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Table 1

Means, Standard Deviations, and Correlation Coefficients for Mentors and Mentees[1]

Variables	N	M	SD	1	2	3	4	5	6	7
1. Activities	54	3.11	.68							
	(50)	(2.88)	(.96)							
2. Age	54	49.8	8.87	.02						
	(52)	(36.52)	(5.27)	(.04)						
3. Benefits	55	2.27	.58	.58**	- .03					
	(52)	(2.28)	(.63)	(.61**)	(.17)					
4. Gender	54			.28*	.16	.19				
composition	(47)			(.35*)	(.11)	(.15)				
5. Gender	54			.29*	- .07	.48**	.25			
	(50)			(.25)	(.09)	(.03)	(.78**)			
6. Hours	54	6.13	11.04	.23	.02	.04	.22	.16		
	(45)	(3.95)	(5.38)	(.50**)	(.05)	(.43**)	(.09)	(.03)		
7. Mentor	54			- .21	.12	- .25	- .04	- .11	.08	
past										
8. Mentoring	55	3.27	.57	.80**	- .01	.68**	.18	.42**	.23	- .22
functions	(52)	(3.02)	(.82)	(.86**)	(.05)	(.64**)	(.28*)	(.15)	(.48**)	

*p < .05. **p < .01.

[1]Parentheses denote results for mentee sample.

Table 2

Hierarchical Regression Analysis for Variables Predicting Mentors and Mentees[1]

Variable	Beta	R^2	Chg. R^2	Adj. R^2	Chg. F
Step 1					
Age	2.3E-03				
	(2.2E-03)				
Gender	.499**				
	(- .254)				
Hours	- 8.6E-04				
	(3.8E-02*)				
Mentor before?	- .262				
Gender	1.9E-02	.25	.25	.16	2.98*
composition	(.254)	(.18)	(.18)	(.09)	(1.93)
Step 2					
Age	- 7.1E-04				
	(1.0E-02)				
Gender	.304*				
	(- .233)				
Hours	- 6.2E-03				
	(- 3.0E-03)				
Mentor before?	-.114				
Gender	4.1E-03				
composition	(9.1E-02)				
Mentoring	.403*				
functions	(.228)				
Activities	.182	.46	.21	.37	5.34***
	(.299)	(.49)	(.31)	(.40)	(5.34***)

Note. Dependent Variable: Benefits.
*p < .05. **p < .01. ***p < .001.
[1]Parentheses denote results for mentee sample.

A Corporate-University Partnership For The Development Of HRD Professionals: A Case Study

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This case study reports the implementation and outcomes-to-date of a corporate-university strategic partnership for the development of HRD professionals and HRD scholars. The partnership was designed using Jacobs' guidelines for HRD collaborations and analyzed using current partnership-building theory.

Keywords: Corporate-University Partnership, Partnership Building

For years, scholars and business professionals alike have written about the need for universities to reach out to business and industry (e.g., Lynton & Elman, 1987; Sheckley, Lamdin, and Keeton, 1993). Traditionally, work on this topic has emphasized the benefits to organizations if they partner with higher education: access to professional knowledge and access to expanded learning resources. Jacobs (1996, 1997) extended the discussion of university-business partnerships in HRD by highlighting the importance of negotiating and producing mutual benefits. Brown's (1983) organizational interface theory and Suchman, Botelho, and Hinton-Walker's (1998) propositions for partnership building provide rich frameworks for examining the features of effective corporate-university partnerships.

Problem Statement and Theoretical Framework

Jacobs (1997) posed several challenges to the current practice of forming HRD collaborations between universities and organizations. While service agreements between universities and organizations for such items as the delivery of training or program evaluation are common, Jacobs ultimately asks the question: How much have these collaborations affected organizational practice and advanced the field of HRD? Jacobs proposed that corporate-university collaborations should be expanded to professional partnerships focused on producing mutual benefits rather than service agreements for specific activities. In our case, the University of Connecticut Adult and Vocational Education program was in need of connections with organizations in which graduate students could experience, observe, and research HRD practices. The Hartford Life Company was in need of specialists who could help with a transformation of the Education and Development division from a training-based enterprise to a performance-based one by providing consultation and up-to-date information.

Brown (1983) described inter-organizational partnership as organization interface, the "linkages between two organizations that evolve over time" to provide mutual benefits in addressing common or compatible interests. Brown depicted organization interface as the processes and interchanges between individuals and selected groups who serve as representatives of their organizations and build the relationship between the two organizations. Organizations as parties to the partnership have interests that may be diverse, complementary, or similar. Organizational representatives provide exchanges and linkages, process information, monitor events, and work to influence representatives of the other partnering organization to best achieve organizational outcomes.

Suchman, Botelho, and Hinton-Walker (1998) extensively defined what Brown (1983) termed the "events at interface" that are required for building effective partnerships among healthcare organizations and stakeholder groups (See Figure 1). The authors proposed that building and maintaining relationships, working toward mutual benefits, conflict management, and successful representation and negotiation of systems-level needs and requirements, are the hallmarks of effective partnership building.

According to Suchman (1998), building and maintaining partnership relationships requires understanding the perspectives of others as well as exploring, respecting, and valuing differences. The process demands sensitivity to communication processes used by the partnering organizations and the representatives as well as the ability to engage in ongoing reflection about the current state and the desired state of the partnership. In addition,

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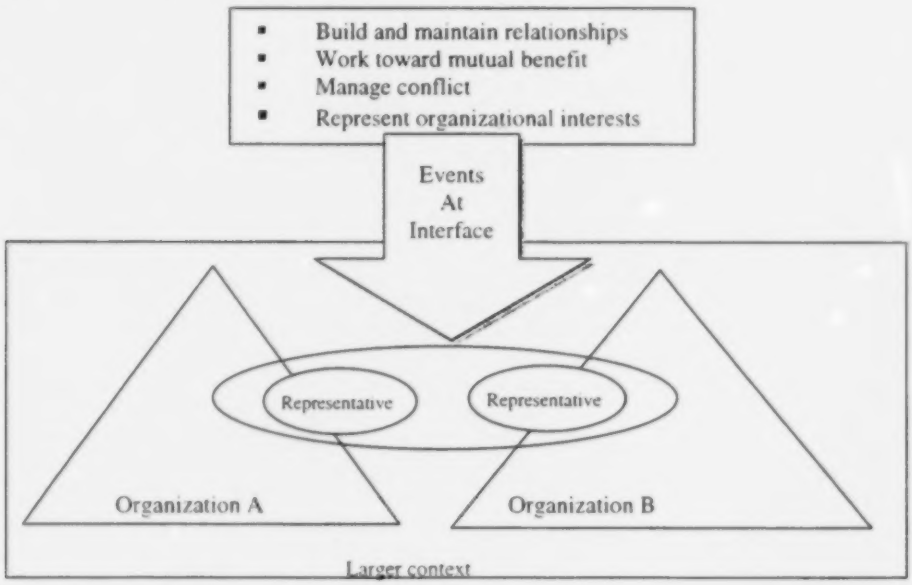
Brown (1983) highlighted the value of establishing roles, monitoring progress, assessing strengths and weaknesses, and solving problems as they arise.

Botelho (1998) proposed that working for benefit to both partnering organizations requires identifying common goals and interests through dialogue and looking beyond individual needs to the needs of systems as wholes. Organizational representatives of the partnership must work to assess obstacles to producing benefits and opportunities for capitalizing on the partnership. Partner differences in emphasis, expertise, perspectives, and cultures can become obstacles to effective partnership and result in conflict if they are not explored and addressed.

Figure 1. Partnering events at organization interface



Note: Adapted from Brown, L. D. (1983). Managing conflict at organizational interfaces. Reading, MA: Addison-Wesley Publishing Company.

Productive conflict management is characterized by Brown (1983) as problem solving where common interests are paramount, common concerns are mutually perceived, information is exchanged relatively openly, and alternatives that are beneficial to both parties are explored and selected. Finally, successful representation and negotiation of organizational needs by the representatives requires effective strategies for representing and understanding needs and using win-win approaches that foster collaboration (Suchman, Botelho, & Hinton-Walker, 1998). Partnerships between organizations experiencing constant and rapid change require constant re-evaluation of needs and re-negotiation of partnership activities.

Brown (1983) proposed that partnerships can benefit and grow from careful analysis of the events at organization interface. While corporate-university partnerships abound, systematic examination of the partnerships are few. Therefore, the main study question is: What characterizes the activities and events associated with the development of a successful corporate-university partnership? Specifically, how are mutual benefits established and achieved? What obstacles to partnering emerge and how are conflicts managed? How are partner needs re-evaluated and activities re-negotiated?

Research methodology

Marsick and Watkins (1997) instructed case study researchers to identify a focus and assumptions for their research by using the literature, to decide on the unit of analysis, to select data collection methods that fit the case, to analyze the data for emerging themes and patterns, and to interpret the findings in light of what is known about

the established focus. In this case study, the unit of analysis is the activities of the organizational representatives responsible for forming and sustaining the corporate-university partnership.

Data were collected to describe and interpret the events that occurred in the partnership building process among the organizational representatives. Data were gathered through observation, dialogue, reflective observation, and group meetings, and were culled from field notes, focus group notes, meeting notes, and documents such as

memoranda and reports. Data were collected and analyzed for a 12-month period. The authors of this report were the primary researchers and the primary organizational representatives in the partnership. The primary researchers discussed, framed, and interpreted events, activities, and results. Interpretations were checked by members of the partnering parties – university interns and corporate education specialists – to confirm and expand the meaning of events. Experts in the HRD field served as peer debriefers and offered alternative interpretations and raised important questions for reflection.

The trustworthiness of the case study was enhanced by triangulation, member checking, peer debriefing, and prolonged engagement. Nevertheless, the case study results are limited to the specific corporate-university partnership that is reported on and limited to the specific point in time in which the data was collected. The results and conclusions will help other corporate-university partnerships to engage in reflective observation and reflective dialogue about their own efforts.

Description of Partnering Organizations

This case study focused on the partnership between the Hartford Life Company Organization and Employee Development (OED) unit of the Individual Annuity Services Division and the University of Connecticut Adult and Vocational Education (A/VE) program of the School of Education. Hartford Life Company is a diversified organization offering life and annuity, group pension and deferred compensation, group life and disability, and structured settlement products. The company is described by Standard & Poor as having strong products, efficient structure, and a well-diversified distribution system. Sales for 1996 totaled $9.8 billion. The partnership with Hartford Life was formed specifically with the OED unit, made up of 25 education specialists and led by Rudy Verrilli, who served as the Hartford Life's lead representative to the partnership.

The University of Connecticut is the state's only public research university and one of only two Carnegie Foundation Research I universities in New England. With a current enrollment of 22,300 students UConn stands with the leading institutions of the nation in the size, scope, and contributions of its research involvement. In the last ten years, University researchers at Storrs and at the Health Center in Farmington have attracted nearly one billion dollars in support of their work. The UConn side of the partnership involved the A/VE program, a graduate program with an enrollment of 50 and focused on workplace learning and professional development research. Marijke Kehrhahn, one of two faculty in A/VE, served as UConn's representative to the partnership.

Description of Partnership Building Activities

Jacobs (1997) provided specific guidelines for forming partnerships that are more likely to result in mutually-beneficial outcomes. Jacobs' guidelines were selected to frame and organize the strategic partnership and provided an excellent structure within which we could explore the research questions. Specifically, the focus for our work was to design and implement a strategic partnership to provide a number of opportunities for the development of HRD professionals working in the corporation as well as graduate students pursuing advanced degrees. A major component of the development plan was to support HRD practitioners to gain knowledge and skills in theory and research and HRD scholars to gain knowledge and skills in corporate HRD practices. Table 1 lists examples of how Jacobs' guidelines were implemented in this partnership.

The corporate-university partnership is built on the assumption that research is an important and integral part of effective HRD in corporate settings. With that assumption in mind we clarified that practitioners and scholars would be research partners rather than handing research responsibilities over to scholars. We established a joint purpose to conduct ongoing, longitudinal transfer of training research in the organization.

In our efforts to implement Jacobs' guidelines, we found that the day-to-day work of OED offered a multitude of opportunities for research with clear potential to advance both theory and practice. Faculty and interns worked with performance support teams to design and implement organizational research projects focused on training effectiveness and performance improvement. The partnership determined the use of research up front to benefit both partners. The organization was looking to improve practice, report to senior management, and

justify resource allocations to HRD efforts. The university was looking to conduct studies for theory-building and publication. We had common interests in advancing the practice of HRD and building support for HRD within the organization.

The organizational representatives envisioned a long-term ongoing partnership that is supported and encouraged by the partnering organizations. We worked to keep the partnership responsive to the changing needs of the organization's represented by continuously generating goals, outcomes, timelines, and products that were used by both the organization and the university. We established a formal process of holding regular meetings, writing progress reports, solving problems, articulating benefits, and making adjustments

Table 1. Jacobs' guidelines for building successful HRD partnerships and implementation strategies

Jacobs' (1997) Guidelines	**Examples of partnership building activities conducted by organization representatives**
1. Expect research to be a part of all HRD collaborations.	• Agreed that specific research and data collection were a critical part of the partnership. • Provided scholars to assist with HRD research that the corporation wished to conduct • Agreed that research projects would be a source of dissertation research, joint publications and presentations.
2. Derive research questions from practice.	• Joined forces with OED to derive research questions from the field. • Designed and implemented organizational research projects focused on training effectiveness and performance improvement.
3. Determine the use of research up front.	• Recognized that the organization's need for data and research was different than the university's. • Established mutual appreciation for different needs and joint goals for research.
4. Make HRD collaborations a formal process.	• Continuously generated goals, outcomes, timelines, and products that can be used by both the organization and the university. • Held regular meetings, wrote progress reports, solved problems, articulated benefits, and made adjustments.
5. Seek long term collaborations.	• Committed ourselves to and regularly discussed the benefits of a long-term partnership. • Included a number of formal projects and informal sharing of ideas and resources related to the partnership to benefit both partners in the long term.

Results

The data analysis was guided by the question, what characterizes the activities and events associated with the development of a successful corporate-university partnership? A broad analysis emphasized that the activities were characterized by a) cooperation and collaboration for producing mutual benefit, b) the identification and surmounting of obstacles and conflict resolution, and c) continuous partnership development. The three components of partnership building that emerged in this case study clarify the value of the various recommendations made by theorists in the field and highlight focused efforts that support corporate-university partnership development.

Cooperation and collaboration for producing mutual benefit.

The corporate-university partnership consistently focused on producing benefits that were mutual and complementary. Much as Brown (1983) proposed, ongoing dialogue between the organization representatives focused on the mechanics and effectiveness of the partnership in producing the desired outcomes for both parties. In the partnership studied, practitioners and scholars worked arm-in-arm to address real organizational problems in a scholarly way, and at the same time provided complementary benefits. The collaborative activities were consciously and carefully designed to produce and confirm mutual benefits. For example, in one such collaboration, HRD practitioners set out to evaluate the performance outcomes of a specific training module. With

the help of doctoral students, practitioners designed the evaluation as ongoing research and included measured of employee and work site variables that are likely to influence task performance. Through this collaboration, scholars developed a better understanding of practicality issues associated with field research while practitioners built skills for improving the rigor of their evaluations. The collaborative activity was characterized by open communication, continuous give and take, and regular evaluation of progress. Additional results of the partnership that amounted to complementary benefits to the partnering organizations are listed in Table 2.

While Table 2 delineates complementary benefits, the partnership provided mutually beneficial outcomes as well. Partners developed a number of products: conference presentations, publications, handbooks for evaluating training effectiveness and designing workplace learning, and a course that provides a template for a new course at the university. In addition, partners formulated a common vision for HRD practice and designed learning projects that addressed the needs of both partner groups.

Table 2. Summary of partnership benefits

Benefits to Hartford Life Company	Benefits to University of Connecticut
• HRD focus on employee performance was enhanced by HRD scholars' knowledge of research, theory, and techniques of how employee improvement can be designed, delivered and evaluated. • Practitioners are able to respond more readily to organizational research needs and to conduct more varied and pertinent research. They are better able to provide solid data to management to show that HRD practices are resulting in improved performance and productivity • Practitioners participated in skills and knowledge assessments that enhanced professional development plans. • HRD managers influenced content and methods in the university classroom and became active partners in the university's education programs by providing internships and research opportunities that impact business goals. • Access to latest research and trends that may impact the future of the HRD • On-site, customized workshops and work sessions designed to provide content and dialogue to generate working solutions to real business problems. • Avenue for demonstrating the company's commitment to ongoing professional development for its HRD specialists. 6. The university offers graduate and undergraduate credit to further promote professional development. 7. Residual modeling benefits with the design, development, delivery and evaluation of programs that the university instructor uses to interrelate adult learning concepts to the business environment.	• Scholarly focus on theory-building and theory-to-practice translation was enhanced by HRD practitioners' knowledge of workplace realities and practical applications. • Scholars are more able to design and conduct field research in HRD and more knowledgeable about activities necessary to bolster the validity of field research. Specifically, the partnership provided opportunities for more in-depth research on transfer of training in corporate settings • Scholars participated in skills and knowledge assessments that enhanced academic development plans. • Faculty and interns became active partners in the corporation's employee development programs and learned skills and attitudes necessary to design and conduct corporate projects. • Access to latest HRD practices and tools in use in state-of-the-art corporate settings. • Opportunities to meet and recruit new students for the Adult and Vocational Education program. • Opportunities for graduate students to design and deliver customized workshops and work sessions as well as refine and practice consulting skills.

Obstacles to Partnering and Conflict Management

Brown (1983) predicted that obstacles to effective partnerships would emerge and that the productive resolution of conflict that arises strengthens the partnership. Botelho's (1998) frames for differences as obstacles were relevant in this case study. The partnership experienced differences in emphasis (i.e., production, profit, and results v. learning, dialogue, and practice), expertise (i.e. experts collaborating with novices and the challenges of translating and communicating across those boundaries), perspectives (i.e. value of experiential learning v. traditional education formats), and cultures (i.e., culture of business v. culture of academia) had the potential to become obstacles to effective partnering. For example, restrictions, approval processes, and administrative requirements from both the university and corporate structures slowed up many partnership activities. Organization representatives of the partnership struggled to explain the procedures and requirements of their organizational systems to each other, to develop mutual strategies for working through red tape and approval channels, and to continue the work of the partnership in the temporary absence of formally approved activities. As one organization representative explained:

> The corporate structure requires a number of sign offs to engage in such an lliance.TheHRD professionals need to champion this cause and seek out a senior manager sponsor to assist with the approval process. Once the approval is given, the HRD professional must continue by meeting the needs of the business goals by providing the instructional support to improve employee performance. The impact of supporting the business goals and employees becomes the rationale for this relationship."

Resolution of conflicts around emerging obstacles was characterized as problem solving. Organization representatives worked to understand concerns, shared information and requirements openly, and crafted solutions that would benefit both parties. Management of conflict required openness, honesty, and reflective observation. For example, a conflict arose involving the university publications office and the approval of an article to be published about the partnership. The writer inaccurately portrayed partnership activities in the article and the organization representatives from both Hartford Life and UConn would not approve the article for publication. The writer, under deadline pressure, involved university executives to apply pressure to UConn's organization representative to influence her Hartford Life counterpart to approve the article. The series of events created conflict for the faculty member who was required to represent the university's needs and at the same time, to maintain the partnership. Throughout the resolution of this conflict, the university partner had to represent the interests of the corporate partner in the face of criticism from the university publications representative and remain committed to working with him in order to get the PR that her adminstrators required. The conflict was resolved through open communication and honest feedback about conflicting requirements with all parties – organization representatives and their public relations offices, as well as administrators – and a solution was negotiated that benefited all parties - the article was published at a later date. The driving force that propelled positive conflict management was the commitment to maintaining a healthy partnership.

Continuous Partnership Development

Both Brown (1983) and Suchman, Botelho, and Hinton-Walker (1998) proposed that effective partnership development requires ongoing attention to maintaining relationships, communication, and evaluation of outcomes. The case partnership was characterized by re-evaluation of the needs of the partnering organizations and re-negotiation of activities, roles, and responsibilities based on those needs. Re-evaluation actvities were particularly necessary in response to persistent change in personnel and structure of the corporate partner. For example, senior executives at the Hartford Life Company, in order to provide continued support for the partnership, required clear evidence that the expenditures of time and money were meeting business needs. Specifically, in a production environment, senior management needed to see that partnership activities were not impinging on production and were having positive results that improved production. As the Hartford Life representative stated:

> "A commitment to the alliance is essential. A senior sponsor is one of the keys to establishing this program. However, the real key is demonstrating that there is a business need and how this program meets that need. In essence, the business leaders must "see" the results...

improved employee performance."

In response, the organization representatives devoted a significant amount of time, along with the partnering groups, to collecting and organizing data that showed positive results on production to share with senior executives. Similar evaluation of corporate and university needs led to re-negotiation of activities. For example, intern assignments changed: Confidentiality statements were drawn up and signed to ensure that interns would not divulge any information about the company's activities; one intern ultimately left the project because he was consulting with a competitor. Learning projects and teaching formats were reorganized: The team learning project format for developing skills in instructional design was too time consuming as an enormous re-training project and an unexpected reorganization emerged. The entire instructional design project was re-evaluated and reconfigured to meet the immediate needs of the OED group. These examples demonstrated the commitment to keeping up with partner needs within an environment of constant change and making sure that the partnership was meeting current pressing needs.

Discussion

While partnership building theory offers many interesting propositions for the effective development of partnerships, the results of the case study highlighted the importance of three key activities and implications for the development of corporate-university partnerships. First, the results of the case study confirm the necessity of focusing collaborative efforts on producing mutual benefits (Brown, 1983; Jacobs, 1997; Suchman, Botelho, & Hinton-Walker, 1998). Specifically, keeping a focus on producing mutual benefits gives clear purpose to the partnership and prevents partnering parties from focusing entirely on their own needs. The mutual focus helps partners develop a clearer understanding of each other's perspectives, needs, and assets, enhancing the potential for further collaboration. Those interested in building effective corporate-university partnerships should develop frameworks and activities that include dialogue and planning that will result in positive outcomes for both partnering organizations.

Second, the results of the case study emphasized the importance of identifying obstacles and resolving conflicts as an integral part of partnership building. It is easy to try to avoid conflict in efforts to maintain harmony in newly formed relationships, but, as Brown (1983) pointed out, conflict that is productively addressed can strengthen the partners' capacity for problem solving and planning. Partners should seek out and value differences, discuss and understand them, assess the differences as potential obstacles, and work openly to understand and resolve conflict.

Thirdly, the building of the corporate-university partnership in this case hinged on continual development. Given the extent and speed of change in today's corporate environments, considering a partnership built or stable doesn't make sense. Agreement that the partnership is in a constant state of development and needs continued attention supports responsiveness to real rather than conceptualized needs. In addition, the case results suggested that universities must develop flexibility and the capacity to change, while corporations might benefit from developing more comprehensive foundations for their HRD work.

Conclusion

Building effective corporate-university partnership demands as much attention to process as to logistics. Often partnerships are formed and maintained by individuals who serve as organization representatives, requiring them to attend to the intricacies and health of the partnership while they represent the interests of their organizations. Obstacles and conflicts will emerge as a function of the activities that attempt to span diverse organizational structures and cultures to create mutual benefits to both partners. The partners' capacity for continuous partnership development, identification and overcoming of obstacles, conflict resolution, and working toward mutually beneficial outcomes is critical to the ultimate success of the corporate-university partnership. The actual task of building and maintaining the partnership is not simple or easy. However, the justification for the partnership is in the growth of HRD professionals and university programs, and improved business processing and employee performance.

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Employed Adults in a B.S. Ed HRD Program Option: Who Are These Students and Why Are They Here?

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This descriptive study was conducted to determine if demographics of students in a distance learning HRD bachelor degree-completion program are consistent with the demographics of the "new adult learner" as identified in the literature, and if factors influencing student participation in this program are consistent with findings in a previously conducted needs assessment of potential students. Data was collected through open- and close-ended questions in a survey of 71 students in the program.

Keywords: Bachelor Degree Completion Programs, Distance Learning, Working Adults

Many working adult looking for career advancement or new jobs do not have a baccalaureate degree. Not having a degree limits opportunities for working adults to continuing education and access to responsible positions or career advancement. This situation is particularly problematic in rural areas. In the state of Arkansas, this situation is very significant.

Poverty and low levels of education characterize remote parts of Arkansas. In addition, educational opportunities beyond a two-year degree are scarce. Arkansas workers are facing difficulties in accessing higher education. School opportunities are restrained to two-year community and technical colleges. Lack of flexibility in scheduling makes higher education impractical for many working adults.

The Department of Vocational and Adult Education of the College of Education and Health Professions at the University of Arkansas is responding to the need of working adults through the delivery of a baccalaureate degree with a concentration in Human Resource Development. The degree completion program, launched in the fall of 1996, requires 125 semester hours. It requires 24 hours of HRD courses, 12 hours of internship, and allows up to 33 credit hours for experiential learning through portfolio development. The option provides the upper division courses required for degree completion on a two-year rotation. Students must take 56 hours general studies, which can be completed at a community or four-year college. Instruction is delivered via compressed interactive television to nine sites on Friday evenings and Saturday mornings.

The degree completion program described above was developed and implemented based upon a statewide needs assessment conducted in 1993. Motivators identified in the needs assessment as contributing to students entering such a program included organizational tuition reimbursement, degree completion opportunities, and desire for professional growth. Barriers identified in the needs assessment included: time away from job, location of program, lack of program information and lack of manager support. However, no analysis has been made of the student population currently in the program. The research problem was to determine if the demographics of the students in the program and factors that may have influenced their choosing to enter the program are consistent with the literature and the previously conducted needs assessment.

Theoretical Framework

Adults are the fastest-growing segment of all the population groups in higher education. According to the projections predicted by U.S. Bureau of the Census in 1995, the number of nontraditional (age 25 or older) college students will arise to almost 46 percent by the year 1998. The Education Resources Institute reported that the percentage of college students age 40 or over grew from 5.5 percent of the total enrollment in 1970 to 11.2 percent in 1993. The figure makes this group to be an increasingly significant part of the college classroom (1996). Nontraditional students are causing institutions of higher education to rethink the focus of academic and student affairs programs. Institutions of higher education have developed alternative structures, policies and programs that serve to provide adult access to higher education.

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The globalization of commerce and trade has had a structural impact on the U.S. economy. The challenges of a global economy require our workforce to be more educated to be able to function in a global community. Today, production, manufacturing, commercial trade, and information have become global in a telecommunications-rich environment that transcends national and geographical boundaries. As American businesses restructure to meet the demands of a global economy, American workers face a future in which they must continually upgrade their knowledge and skill, or learn new skill in order to remain competitive and to increase their earning power. As increasing number of working adult students seek access to higher education, they will demand more time- and place-independent learning options and technology-based institutional learner support services (Dubois, 1996).

Husson (1996) defined the "new adult learners" as being approximately 35 years old, working full or part time with their employers providing tuition assistance and as students who are focused, goal-oriented, and motivated. They have severe time constraints, and will not tolerate hassles. They will immediately apply learning to their work. They are serious and hard working, and they have to balance multiple roles at the same time. Foster reported that degree completion, job advancement, improved long-term income, development of vocational skills, and interaction with others (1993) motivate adult learners. Aslanian (1989) found that adult learners tend to choose to study subjects directly related to their jobs or careers. Population, mobility, technology, occupations, housing, income, life expectancy and government affect societal changes. These accelerated changes are forcing adults to learn new skills, knowledge, attitudes and values.

Distance learners bring those characteristics to the educational process at the time of entry, such as: educational preparation, and motivational and persistence attributes, but also variables that more situational in nature (Billings, 1988; Kennedy & Powell, 1976; Sweet 1986). Situational barriers stem from a person's life situation and involve time constraints and family and employer support (Powell, Conway, & Ross, 1990; Pythian & Clements 1982; Rubenson, 1986; Woodley & McIntosh, 1980). Swift (1987) suggested that financial problems play a role in the attrition of nontraditional students. Financial aid from the institution or employers of the adult learners is positively associated with retention. Higher socioeconomic status is often a positive predictor of academic success.

According to Aslanian (1993), 82 percent of undergraduate adult students are degree seekers; most of them want to obtain degrees so as to advance in their career. Eighty-five percent of adult students are women, which reflects a different in life schedules: some women are doing later while some men did earlier (Aslanian, 1993). According to Foster (1993), 75 percent of the adult learners are age 25 to 44, 55 percent have some college credits, and 32 percent are in professional/managerial positions. According to Loser, Trabandit, Hatheway, and Donell (1996), 70.3 percent of telecourse students are female, 29.7 percent are male, 59 percent work full time and 19 percent work part-time. While asked reasons they take telecourses, they reported that conflict with on-campus class is the highest scored factor (43%) while minimized travel to campus is the second highest scored factor (35%).

According to the College Board (Aslanian, 1996), there is a national demand for accelerated degree programs and weekend colleges through the use of distance education. It was found that 45% of all undergraduate adult learners have taken most or all of their courses on weekday evenings, while 10% have enrolled in day and evening classes and 5% in weekend courses. The report also states that 20% of undergraduates have had some courses on the weekend.

Distance education responds to two national trend: adult learners are as the"new majority" in higher education which demands institutions become more responsive to learners' needs as degree seekers; and the greater availability of telecommunications technologies now makes it possible to serve students almost universally with expended educational services and distance learning opportunities. Distance education is a catalyst for change and is helping to shape the transformation of higher education from a facilities/faculties-centered to learner centered. Distance education also create an opportunity for adults to develop new skills, pursue a clear path way to a degree, and obtain educational credentials without having to forsake family and work responsibilities (Dubois, 1996).

Research Design

The primary purpose of study was to determine the demographics, educational background, and work experience of a group of nontraditional HRD students participating in a distance-learning bachelors degree-completion program. A secondary purpose was to examine the students' perspectives on factors which may influence their entering the program including the type and amount of family and employer support they are receiving in pursuing the degree, their motivation for pursuing the degree, and their perceived challenges/strategies to their completing the degree.

Participants in the study were students in the HRD distance-education degree-completion program option. The total number of the population was 71 students. Data was collected through a survey consisting of both closed-ended and open-ended questions. (Case studies are currently underway for phase two of the study.) Students were mailed the survey; within six weeks, a second survey was mailed to those not returning the original survey. A total of 63 useable

surveys were returned (89%). Student participation was voluntary, and each participant was required to sign a letter of informed consent. Data was analyzed through descriptive methods, reporting frequencies, range, and percentages of responses to each closed-ended question. Responses to open-ended questions were grouped according to topical responses. Data is reported in aggregate form, and individual students are not identified. The study was supported by a grant from the U.S. Department of Education, Fund for the Improvement of Postsecondary Education (FIPSE).

Research Questions

The research questions were: Do the demographics of these students differ from those identified as the "new adult learner in the literature"? Are the factors that are perceived to be important for attendance in this program consistent with those identified in the prior needs assessment?

The following questions were included in the survey:

1. What are the ages, gender, and ethnicity of the students?
2. What is the education background of the students? How many hours of college credit did they have prior to entering the program? How many of them had an associate degree?
3. What is the work experience of the students? How many years of work experience do they have? What is the type of position do they hold in their current job? What kind of organization do they work for? How many years have they worked in their present position? What is the longest time they have been employed in any position? What is the size of the organization where they are employed?
4. What do they perceive to be the amount of family support they are receiving? What are the examples of this support?
5. What do they perceive to be the amount of employer support they are receiving? What are examples of this support?
6. What are the primary reasons why they are pursuing this degree?
7. What do they perceive to be their most difficult challenges to completing this degree? How do they plan to overcome these challenges?

Results

The following is a summary of the results of the survey:

Enrollment by Ethnicity

The majority of the students are Caucasian (89%). The seven black students (11%) are located in a region of the state referred to as the Delta region, an area of high black population. The proportion of black students in this group is higher than that of the black population of the general undergraduate enrollment at the University of Arkansas, which reported an undergraduate black enrollment of 6.09% and undergraduate Caucasian enrollment of 83.37% in Spring 1998.

Enrollment by Gender

The female (59%) and male (41%) student populations in this program are somewhat similar to the general undergraduate population for the University of Arkansas, which was 48.85% female and 51.15% male in Spring 1998. However, the College of Education and Health Professions traditionally has a larger female undergraduate enrollment than male undergraduate enrollment, as evidenced by the Fall 1996 enrollment of 25% male and 75% female.

Persons with Associate Degree

A majority (52%) of persons entered this degree completion program with an associate degree. The number of on-campus undergraduate students at the University of Arkansas with an associate degree is not available; however, it is expected that the majority of traditional students would not have the associate degree since the University of Arkansas does not grant an associate degree.

Age of the Participants

Eighty-six percent of participants ranged in age from 22 to 50, which is consistent with the survey results reported by Foster in 1993 that 75% of the adult learners are age 25 to 44. The majority (70%) of the participants in this program is between the ages of 31 to 50. There is no student younger than 22 and older than 59.

Years at Present Job

Seventy-nine percent of those participating in this program had worked at their present job between 1 to 10 years. Percentage of persons at the same job for 16-19 years totaled only 3%, while those working between 11-15 years totaled 13%.

Longest Years of Employment

The majority of students (63%) fell into the 6 to 15 years of employment range while only 18% had been employed five years of less and only 5% had been employed over 21 years.

Family Support

All students reported some degree of family support with the majority of them reporting total support from their families. Specific support mentioned included verbal encouragement (89%), financial support (27%), child-care assistance (25%), help with responsibilities at home (59%), transportation (22%), and other (16%).

Employer Support

Only 6% of the students reported little or no support from their employers for their attendance in the program. The largest percentage (41%) described their employers as being totally supportive. Specific support mentioned included verbal encouragement (67%), tuition reimbursement (67%), time off from work (68%), other (16%).

Type of Work

Of the students participating in the program, 44% described their work as being in management and 16% described their work as supervisory. Thirty-eight percent described their positions as being non-supervisory in nature.

Kind of Organization

The largest percentage of students (30%) works in an educational setting. The second largest type of organization was manufacturing (20%) followed by service (12%), transportation (11%), and health (8%). The remaining students were fairly evenly spread among health, government, utility, agricultural, aircraft, accounting, retail, and technology.

Distance of Travel to Classes

Sixty-three percent of the students travel less than 30 miles to attend classes. The host sites are located at two-year institutions, which are within 30 miles of most citizens in the state

Years of Anticipated Graduation

The two cohorts started in 1996 and 1997 respectively. Seventy-four percent of the students enrolled in these two cohorts anticipate graduating on time; i.e., within the two-period in which the classes are being offered.

Discussion and Conclusions

The demographics of this group of students do not differ greatly with the work of Husson (1996), Foster (1993), Aslanian (1989) and others who describe the "new adult learner" as one who is typically around 35 years of age, working full time, receiving tuition assistance from employers, goal oriented, and motivated. However, the demographics of the group do differ from the traditional, on-campus student at the University of Arkansas. For example, black enrollment (11%) is higher for this group than the undergraduate black student enrollment of 6.09% on campus in Spring 1998. When examining black enrollment by site, it is noteworthy that 58% of the students at a host site in southeastern Arkansas located in a predominately black community located in an area known as the Delta were black women. This suggests that program accessibility in other black communities could increase minority enrollment. This notion is supported by the responses to open-ended questions, which noted that when asked what was the primary reason for enrolling in this program, 40 persons said to earn a degree. Other responses included schedule fits requirements (5 responses), personal satisfaction (5 responses), and desire to be more competent in my job (4 responses). The features of the program that appeal most to the students were Friday and Saturday classes (19 responses); 9 weeks per semester/2-year course rotation (15 responses); and recognition of experiential learning (10 responses). Content, getting a degree, instructors, availability and access each received 7 responses and content geared to adult learners was mentioned 4 times. The convenience of living within 30 miles of program delivery sites seems to be a positive factor with many students.

This program appeals to a gender-balanced population, which is similar to the general undergraduate population at the University of Arkansas; however, it differs greatly to the College of Education and Health Professions undergraduate population, which has a 75% female-25% male ratio. It is not clear if the more gender-balanced enrollment is because of the nature of the subject matter, the delivery method, or a combination of both.

The majority (75%) of students has from one to 10 years of employment at their present job. This seems to suggest that those working in their present job for ten years or less might be more inclined to seek further education than persons employed in their present job for more than 15 years. It may be more important to persons in mid-career to earn a degree than those nearing the end of their career. The fact that a majority of the students (44% management, 16% supervisory) are in a management/supervisory role in their present position may also account for their motivation to improve their skills by returning to school. The students indicated that they would like to get information and knowledge in the Human Resources Development field and gain skills that they can use in their jobs. The nature of the content (HRD) seems to appeal to a broad constituency, with students employed at a variety of work settings. The fact that the host sites are at educational institutions and that some of those institutions allow their employees to take courses at a greatly reduced tuition rate could explain the relatively large percentage (30%) of students being employed in an educational setting.

The participants were informed about the HRD program from someone in their companies or from the University of Arkansas and other educational institutions. Newspapers and friends were other source of information about this program. The things that appeals most to the participants about the HRD program are the weekend classes, the nine-weeks per semester/two-year course rotation and the recognition of experience for credit. They also mentioned content, getting a degree, instructors, and availability as features that appeal to their entering the program.

The most difficult challenges the participants have faced in completing the degree have been the portfolio development, time management, and the internship activity. Participants believe they can overcome these challenges through hard work and better focus, managing time, patience, and persistence. Participants also mentioned instructors support, as an important source of encouragement. Seventy-four percent of the students expect on-time graduation. A few students were admitted prior to completion of the general studies requirement, which could account for the 26% who anticipate taking longer than two years to complete degree requirements. Thirty-eight percent of the participants plan to enter a graduate degree program after completing their baccalaureate degree.

For the final question about what program changes they would suggest, four participants suggested a three-hour course on portfolio development, three participants suggested less time per class, three participants suggested more weeks, and three participants suggested adding one evening class during the week. In comparing the results of this study with the prior needs assessment, it is clear that there is agreement on the factors identified as important to prospective students and those identified as important to this group of students.

New HRD Knowledge

While the authors do not intend to generalize the findings of this study to the general population because of the small number of participants, it is clear that offering a baccalaureate degree program at two-year colleges by distance learning

indeed benefits working adult students who are not geographically accessible to 4-year institutions. The results of the study, while informing the authors on issues involved in program evaluation, should also assist other educators with identifying the demographics and needs of working adults, in designing curriculum systems and practices for nontraditional students in HRD programs, and in delivering these programs through distance learning. Identification of the demographics and motivation factors of these students will help educators identify prospective under-served student populations. In addition, an understanding of the educational and work backgrounds of this group of students should help educators design curriculum appropriate for this audience. Understanding of the reasons for students pursuing the degree as well as challenges and support available from family and employers should help educators in designing delivery systems to meet the special needs of working adults.

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Women Entrepreneurs: Maintaining Business Success Through Human Resource Development

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Women entrepreneurs own more than 7.7 million enterprises employing approximately 35% of the labor force in the US. They are important clients for HRD activities. This study investigated the contributions of HRD to business success. Women entrepreneurs recognize the need for HRD, for both themselves and their employees. Some women entrepreneurs have their employees participate in formal HRD programs, but many do not have formalized programs. Practitioner and research opportunities exist for HRD professionals.

Keywords: Organizational Development, Change, Systems

Entrepreneurs are not a homogeneous group; they can be grouped by ethnicity, immigrant group, gender, age, or other criteria. Each group of entrepreneurs has its own distinct characteristics, challenges, and opportunities. Hisrich and Brush (1985), Kaplan (1988), and Moore and Buttner (1997) have presented women as one of the fastest growing groups of entrepreneurs. Currently, according to Moore and Buttner (1997), women own more than 7.7 million firms that employ approximately 35% of the labor force in the United States.

According to Miner (1996), "real similarities and real differences exist between men and women entrepreneurs" (p. 141). He based this assertion on years of research on entrepreneurship and entrepreneurship development. Women entrepreneurs may experience a different set of challenges in their entrepreneurial lives from other groups of entrepreneurs. Thompson (1995) stated that women entrepreneurs experience difficulties in getting capital and training and are restrained by household and child-rearing responsibilities. Hisrich and Brush (1985) also stated that women entrepreneurs lack support systems that would facilitate their efforts.

Women entrepreneurs are not a homogeneous group, either. Moore and Buttner (1997) pointed to the danger of treating women entrepreneurs as a single group: "Previous findings that had yielded a single profile of female entrepreneurs as being primarily sole proprietors with similar educational backgrounds and a basic interest in extending home skills into the marketplace no longer fit" (p. 2).

Despite the differences among women entrepreneurs, it is possible to study women entrepreneurs as a distinct entity. Prospective women entrepreneurs are likely to benefit from learning about the success stories of other women entrepreneurs. Experienced women entrepreneurs who participate in a study on women entrepreneurs may reap intrinsic benefits by sharing their experiences. Women entrepreneurs may experience such problems as conflicting role expectations and responsibilities. Experienced women entrepreneurs will probably have overcome unique problems in their entrepreneurial journeys. Sharing their experiences in a research project would be helpful to prospective women entrepreneurs and others who may not be as successful.

In spite of increased research on entrepreneurship, very little is known about women entrepreneurs (Moore & Buttner, 1997). Thompson (1995) acknowledged "the missing gender dimension in studies of entrepreneurs" (p. 107). Earlier, Hisrich and Brush (1985) had decried the lack of studies on women entrepreneurs. There is need to increase our knowledge of women entrepreneurs.

People learn from role models. Prospective women entrepreneurs are likely to learn from successful women entrepreneurs—*role models* (Williamson, 1988). Profiles of successful women entrepreneurs are likely to provide prospective women entrepreneurs with reference points for their own entrepreneurial journeys. Stories of success may in fact be an inspiration and a target at which to aim in order to succeed. Recognition of research participants as successful entrepreneurs may be a morale booster in their already successful entrepreneurial journeys.

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Statement of the Problem and Purposes

Entrepreneurship is emerging as the defining trend of the business world of the 21st century, driven by student demand. No field of business education is growing faster today than that of entrepreneurship. More than 120 accredited business schools are offering entrepreneurship as a major (Bronner, 1998). Many U. S. high schools, community colleges, technical colleges, and universities have entrepreneurship development programs (Pitman, 1988; Van Hook, 1987; Williamson, 1988). Vesper (1996) stated that there are over 400 universities and colleges that offer entrepreneurship courses and/or entrepreneurship concentrations. Stewards and Boyd (1989) suggested that entrepreneurial education was a realistic alternative for women and minorities. The researchers in this study believe that entrepreneurial programs for women are worthwhile investments. Such programs should of necessity draw from the experiences of women entrepreneurs--their stories need to be told or they need to appear as resource persons in entrepreneurship development programs. Hence, there is a need to develop descriptive profiles of successful women entrepreneurs.

In this study, stories of successful women entrepreneurs will be documented for the purposes of providing role models for women entrepreneurship development. The researchers will also describe how these women entrepreneurs generated business ideas and identified business opportunities that they considered would lead to success. The researchers will describe the critical points in the lives of these women entrepreneurs; the strategies employed by these women entrepreneurs to ensure success; the strategies used by these women entrepreneurs for recruiting, developing, and maintaining human resources; and the meaning of business growth to these women entrepreneurs.

Need for the Study

The researchers are aware of the criticisms leveled by Low and MacMillan (1988) at studies on personality or cultural background of entrepreneurs. The gender of the entrepreneur would probably fall under the same criticism. In spite of the criticism, little is known about this important segment of entrepreneurial population (Moore & Buttner, 1997; Thompson, 1995). Therefore, the researchers consider a study on women entrepreneurs to be a valuable addition to our knowledge of entrepreneurship.

Further, Moore and Buttner (1997) have stated, "Among the things revealed by broader and more intense scrutiny was that practically nothing was known about female entrepreneurs" (p. 12). The scrutiny Moore and Buttner were referring to was on the advances made in research on entrepreneurship. There is simply not enough information on women entrepreneurs. Therefore, there is a need to add to our knowledge through research about this fast growing group of entrepreneurs.

In addition, reporting about the successes made by women in the business world has been largely negative because emphasis has been placed on what they have not achieved rather than on what they have achieved (O'Brien, 1998). Though O'Brien was commenting on popular reporting in the media, it is the desire of the researchers to present a broader view of women entrepreneurs. Women entrepreneurs have demonstrated that they have the capacity to participate fully in national economic development. Researchers in entrepreneurship should have more studies on successful women entrepreneurs in order to match the growth needs of women entrepreneurs.

Relevance of the Study

Women entrepreneurs as a group constitute one of the largest sources of employment for the labor force. This is likely to continue to increase as women-owned ventures continue to grow. As employers of labor, women entrepreneurs have concerns related to human resource development. HRD concerns for women entrepreneurs are threefold--entrepreneurial development for the women entrepreneurs themselves, personal development for the women entrepreneurs, and human resource development for their employees.

HRD practitioners and researchers in HRD cannot afford to ignore such a large employer of human resources. The researchers studied women entrepreneurs in order to identify issues related to human resource development for women entrepreneurs and their employees. HRD practitioners need to know the needs of women

entrepreneurs in order to do business with them, and they need models to share in their HRD practices. This study on women entrepreneurs and how they recognized business opportunities, how they achieved success in their businesses, and how they dealt with human resource issues will be a valuable addition to studies on women entrepreneurs.

Objectives of the Study

The objectives for this study are:

1. To develop detailed descriptions of some successful women entrepreneurs operating businesses in the cities of Minneapolis and St. Paul.
2. To determine how these women entrepreneurs generate business ideas.
3. To determine how these women entrepreneurs identify and evaluate business opportunities.
4. To record the ideas of these women entrepreneurs on human resources and HRD.
5. To record what these successful women entrepreneurs consider to be the critical points in their entrepreneurial lives.
6. To determine what business growth means to these women entrepreneurs in relation to their businesses.
7. To identify strategies these women use to ensure business growth.
8. To discern the lessons these women entrepreneurs can offer to prospective women entrepreneurs and less successful women entrepreneurs.

Research Question

Moore and Buttner (1997) found that some women entrepreneurs have been able to move beyond the glass ceiling. The central question for this study is: *What lessons can we learn from a group of successful women entrepreneurs*? Of main interest to the researchers are the lessons related to human resource development for women entrepreneurs and their employees.

Constraints of the Study

This is a case study of some women entrepreneurs operating in the cities of Minneapolis and St. Paul. The methodology does not require nor permit generalization. Interviewing is the method of data collection and may affect the quality of data collected. The selection of the research participants was done by referrals which involved a subjective judgment (in terms of who is successful) on the part of the referrers. However, more detailed information is collected using interviews than when using other methods of data collection.

Review of Literature

The literature reviewed explored the meaning of entrepreneurship, general issues of entrepreneurship, groups of entrepreneurs that have been studied before, and available literature on women entrepreneurs.

Meaning of Entrepreneurship

There is no agreement about the meaning of entrepreneurship. Cochran (1968) explained that the word "entrepreneur" has developed to mean an adventurer and a person who bears uncertainty. He added that, besides having to supply capital, entrepreneurs must have judgment, perseverance, knowledge of business, innovative approaches, and an ability to lead/manage. He further noted that entrepreneurship can be exercised by business people as well as non-business people.

Brandstatter (1997) also had difficulty with the word "entrepreneur." To him entrepreneur entailed business ownership, decision-making power, leadership, or size of company. He saw entrepreneurs as business owners or top managers of a company, referring to the latter group as dependent or employed entrepreneurs.

Lumpkin and Dess (1996) also recognized the lack of consensus in characterizing entrepreneurship, leading to difficulties in investigating relationships of entrepreneurship and other business variables such as performance. They concluded that it is unlikely that there will be consensus regarding the meaning of entrepreneurs and entrepreneurship in the near future.

Researchers normally find it necessary to define what entrepreneurship means for them and their research. For the purposes of this study, women entrepreneurs will be those women who own businesses and/or take active roles in management of business ventures, be they sole proprietorships, partnerships, or corporations. The venture should be making annual revenues from sales or fees of $500,000 or more. An earlier study by Moore and Buttner (1997) had a lower range of annual revenues of $250,000 to $499,999. The reason for using a higher revenue criterion was the fact that the study is targeting successful women entrepreneurs. Another criterion for inclusion in this study was the venture's potential for growth. The researchers are aware that success can be defined in terms other than revenues (Moore & Buttner, 1997; O'Brien, 1998). However, a quantitative value would give a more consistent measure of success than a subjective one would. The researchers began the research study by using qualitative measures of success, that is, asking leaders of associations to identify successful women entrepreneurs within their membership. The leaders of the participating associations did not have access to the financial details of their members. Thus, initial identification of successful woman entrepreneurs was based on subjective criteria or a combination of criteria.

Research in Entrepreneurship

There are many studies on entrepreneurship, several of which have been presented at conferences on entrepreneurship research. Babson College has been holding annual conferences on entrepreneurship research since 1981. These conferences have included both general entrepreneurship and specific classes of entrepreneurs.

Classes of Entrepreneurs

Moore and Buttner (1997) have described two types of entrepreneurs--traditional and modern. They stated that traditional women entrepreneurs tended to be in sole proprietor service businesses and remained small and slow growing. They contrasted traditional with modern women entrepreneurs who engage in a variety of occupations and have experience in the business world through better preparation in technical and planning skills and social networks. Miner (1996) developed a classification of four types of entrepreneurs--personal achievers, super-salespersons, real managers, and expert idea generators. Entrepreneurs could also be classified on the basis of their social background, gender, national origin, type of business (service, manufacturing, construction), and ethnicity. Brandstatter (1997) studied Austrian entrepreneurs and found that there is a difference between those entrepreneurs who founded their businesses and those who inherited businesses or entered into business ownership through marriage. Each group of entrepreneurs is likely to experience different opportunities and challenges from other classes of entrepreneurs.

Women Entrepreneurs

In a study of women and minority entrepreneurs, Hisrich and Brush (1985) reported that 90% of women entrepreneurs operated service businesses, while other groups of entrepreneurs had other types of businesses, such as construction and manufacturing. They also found that women and minority entrepreneurs experienced similar problems of finance, lack of training, and focusing primarily on service-oriented businesses. Moore and Buttner (1997) reported, however, that women entrepreneurs are now entering into non-female businesses of finance, insurance, manufacturing, and construction.

Brush and Hisrich (1988) investigated the strategic origins of women entrepreneurs and their relationships to the growth of their business ventures. Earlier, Hisrich and Brush (1987) had studied women entrepreneurs for personal characteristics, family background, and management skills and their impact on business success and growth. Kaplan (1988) also investigated the reasons women change from employment to business ownership.

Research Methodology

This research was designed as case studies of successful women entrepreneurs operating in the cities of Minneapolis and St. Paul, Minnesota. Information was collected from the research participants through face-to-face interviews. All interviews were held on the premises of the research participants, except for one. The researchers utilized interpretive research designed to collect information, stories, and experiences from women entrepreneurs who were considered successful by their colleagues or leaders in business organizations.

Research Design

Initial plans were to interview thirty successful women entrepreneurs. Twenty women entrepreneurs agreed to participate in the study. Four of the research participants did not meet the criteria ($500,000 annual sales or fees) for inclusion in the study. An interview guide was developed, but the interviews were largely unstructured. The research participants were allowed to make uninterrupted responses.

Research Participants

The selection of research participants was largely through referrals by leaders of associations of business owners and other business support groups, such as funding agencies. Leaders in the St. Paul Area Chamber of Commerce, the Midway Chamber of Commerce, The Collaborative, and the Milestone Growth Fund made referrals of women entrepreneurs whom they thought had been successful. Personal referrals were also made by women entrepreneurs in the course of interviews. Directories were also a source of valuable information for contacts. In this regard, the national directory of the National Association of Women Business Owners (NAWBO) was used as a source of contact information for women business owners. Numerous efforts to contact (by telephone and letters) the leaders of the Minnesota Chapter of NAWBO were unsuccessful.

Instrumentation and Validation

The study was designed from an interpretive perspective. Its validity is built on agreement between the researchers and the participants on the themes emerging from the interviews or conversations. The following questions were used in the interviews:

1. Explain how you began your operations.
2. Describe the nature of your business.
3. How do you determine that a business opportunity will be successful?
4. Describe the critical points in your entrepreneurial life.
5. What does human resources mean for your business?
6. What does human resource development mean for you and your business?
7. Explain what business growth means for you and your business.
8. Describe your strategies for ensuring business growth.
9. What advice would you give to other women entrepreneurs, especially prospective ones?
10. What additional comments on any topic/issue related to women entrepreneurship would you like to make?

Individual interviews were held with 16 women entrepreneurs. The interviews were conversational as much as possible with the research participant being allowed as much time as desired to answer questions. Interviews continue to be held as research participants are identified. The interviews were tape recorded for those who had no objections. One interview was recorded manually at the request of the interviewee. Tape recordings were transcribed and hard copies made to enable analysis. Background information of the entrepreneurs was also collected from the entrepreneurs in the course of the interviews. The research participants have committed themselves to provide additional information whenever needed. To ensure validity of the data collected, the research participants will be provided with a summary of their transcripts and be invited to make written corrections of any misrepresentations of their views or facts.

Analysis

Analysis entailed development of descriptions and identification of themes from the transcripts of the tape-recorded interviews. Dominant themes were identified regarding the critical points in their entrepreneurial careers, the meaning of business growth and strategies for growth, and human resource development practices. Themes were identified by the frequency of their occurrence. In the final report, the findings will be supported by extensive quotes from the research participants.

Findings

Findings are based on the interviews and any materials made available by the research participants to the researchers. The findings (and themes) identified fall under operations, idea generation, evaluation of opportunities, critical points, human resource development, business growth and success, sources of support, and advice to other women entrepreneurs.

Nature of Operations

These women entrepreneurs are engaged in a variety of business ventures. Some of these women are engaged in businesses that require a high level of professional education and training, such as engineering or law. One woman called these ventures "high barrier" ventures. Most were involved in the sale of services, such as translation, marketing research, and human resource services. Others were engaged in what would be termed "low barrier" ventures, such as dealing with processing and trading (e. g., bakery). There is no one category of business venture that can be said to belong to these women entrepreneurs. They are in all aspects of the business world.

Business Idea Generation

These women largely entered into business areas in which they had prior experience as employees, or they had adequate academic and professional training, or in areas where they served a very special need. Employment served as a good training ground for entrepreneurship. One woman entrepreneur with a large staffing business began as a clerical employee in the company she now owns. Academic and professional training also played a key role in determining which business to operate. Academic and professional education in engineering and law played a part in the decision of women entrepreneurs in those fields. Of those who did not have experience in their business areas, one had a franchise (bakery) and the other was in the translation business—a special need among her Asian community. Now she has personnel to translate into Eastern European, Japanese, and African languages.

Evaluation of Business Opportunities

Some of the women drew elaborate business plans, but others used intuition to determine which business ventures would be successful. At the initial stages of a business venture, evaluation of business opportunities is largely by intuition. It is only when the businesses have achieved considerable growth do these women entrepreneurs draw business plans. Where business plans have been used, they have been contracted out.

Critical Points

Initial analysis indicates that the first two years in business are critical and have fond memories of family support. Strong support came from the spouse, but in most cases it has included other members of the family, including fathers, mothers, and grandmothers. Partnerships have not worked well for those women entrepreneurs who have tried them. Partners have not been faithful as far as financial resources are concerned, or the women entrepreneurs did not consider seeking a partnership relationship. One partner explained how she came back from leave only to find her partner had left the business, yet she was the one in charge of financial resources. Because of that partner, she had to reduce her staff to continue in business. A partnership with her spouse has worked well. Another partnership in a legal profession has also worked well. These two partnerships have worked well because the partners have worked responsibilities based on individual expertise.

Human Resource Development

For the large business ventures owned or operated by women, HRD programs are based on the needs of the ventures. For example, two women entrepreneurs' businesses provide care for vulnerable adults—the elderly and adults with developmental/mental disabilities, where training and retraining of employees is required for state registration. Training programs are needed to remain in business. The other women brought with them skills (mainly technical and professional), hired those with skills that they need, and, to a lesser extent, sought programs for human resource development. However, all women entrepreneurs valued human resources and human resource development. One woman engineer running her own business said that all that they sell is "between the ears."

Business Growth and Success

These women are capable of achieving high levels of business growth. One has grown a corporation into annual revenues of over two hundred million dollars. She has been the president of the company since its inception. Two others have gone beyond the one million dollar mark. The majority of the women interviewed have achieved gross revenues between $500,000 and one million dollars. Two have not reached the $500,000 mark, in spite of this being one of the criteria for being interviewed. One of these has the potential to become a multi-million dollar business. The other is unlikely to reach this mark in the next two years. Most of the women entrepreneurs interviewed are not enthusiastic about unchecked growth. One expressed concern about how to disengage herself. In her view, the bigger her venture grows, the more difficult it will be for her to sell it when she decides to retire.

Sources of Support

The greatest source of support for these women is the immediate family (spouse, mother, father, and children). The spouse was cited as the most important source of emotional and financial support. All stressed the need to have an understanding spouse to encourage and give financial support at the initial stages of the business venture. Two women have their spouse as their partner. In both cases, the women were the initiators of the businesses. One woman found her greatest support from her grandmother who co-signed for the first loan for the business. Women's associations were also a source of support. One woman gave an example where she and other women act as board members for each other's businesses.

Advice to Prospective Women Entrepreneurs

The most frequent advice is that of being persistent in their pursuit of business goals (don't give up) and building good personal working relationships with bankers, professionals (accountants, lawyers) that one may hire, clients, employees, and family.

Conclusions, Implications, and Recommendations

The following conclusions, implications for HRD, and recommendations for further research apply:

1. Women entrepreneurs can be successful in a wide spectrum of business ventures---in "high barrier-high return" as well as "low barrier-low return" ventures. Some of these women have found success in areas that have been male dominated.
2. Prior employment, academic education, and professional training play an important role in determining the kind of business enterprise in which to engage. These women sought business opportunities in areas in which they had experience as employees or have professional preparation. None of the participants had considered entering a business that was completely new to what she already knew or did. Only the Asian woman in the translation business was an exception. However, she is in an area with high demand and little competition.
3. Intuition as well as business planning played a role in evaluation of business opportunities.
4. Strong family and professional relationships are important for success in entrepreneurship. They also need good customer relations.
5. Women entrepreneurs value human resource development for both themselves and their employees. Some employees attend regular training in keeping with government regulations. One woman includes training in the

budget for new hires. Many women expressed a desire for professional development to help them run their businesses in a better way--accounting and management were mentioned frequently.

6. Women entrepreneurs can act as role models for other entrepreneurs, women or men. Through associations, women entrepreneurs can help one another, including prospective women entrepreneurs.

Implications for HRD

HRD professionals should accord women entrepreneurs the importance they deserve as clients for HRD activities. Women entrepreneurs have training and organization development needs, for themselves, their employees, and their organizations.

Recommendations for Further Research

Much more information is needed in the area of women in entrepreneurial environments. This study needs to be replicated many times to continue adding interpretive knowledge and information to the insights gained in this study. Research into the specific HRD needs of women entrepreneurs—training and development, organization development, and career development—will all add useful information. Teaching case studies developed from research cases will provide useful material for entrepreneurial development activities. Additional descriptive research will also be useful in provide more information about "modern" women entrepreneurs. It would also be helpful to detemrine the characteristics that allow some women to succeed in entrepreneurship, while others fail.

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Evaluating the Impact of a Union-Management Career Development Program

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The purpose of the study was to evaluate the impact of a career development program in a steel plant which recently underwent severe restructuring and downsizing. Impact was measured in four specific areas: employee's perceptions about the effect of the program on their past job, during transition, on a new job, and socially. Using a descriptive survey design based upon a non-random sample of 129 active participants in the program, this study also examined the reasons for participation and the utilization levels of various career development activities.

Keywords: Career Development, Program Evaluation, Union-Management Partnership

Learning and learning-how-to-learn have become critical competencies in the modern workforce (Dixon, 1990; Senge, 1990; Zuboff, 1988). Yet, despite the investments that are being made in formal, informal, and on-the-job training to foster learning in the workplace, few organizations in the United States are evaluating the effectiveness, merit, or worth of these training programs (Hilbert, Preskill & Russ-Eft, 1997; Preskill, 1994). Although numerous models of training program evaluation exist, Kirkpatrick's four-step appoach or four-level model (Hilbert, Preskill & Russ-Eft, 1997; Kirkpatrick, 1994) is one that is most often used by practicioners despite some of its limitations (Holton, 1996). In Kirkpatrick's model, there are four levels of possible training outcomes: reactions, learning, behavior, and results (Kirkpatrick, 1994). Reactions, Level 1, are intended to examine what the trainees think and feel about the training received. Learning, Level 2, is the extent to which trainees have increased their knowledge and skills as a result of the training. Behaviors, Level 3, relate to the extent to which trainees are using the new knowledge and skills they have acquired. Results, Level 4, seek to examine how the training has had an impact on the organization. This model serves as the framework for this evaluation study.

Definitions associated with career development focus on either the wholeness of an individual or the balance between the needs and development of an employee and an organization. When career development is primarily individual-centered it deals with the needs, wants, capacities, and potential of the whole person including environmental pressures, significant others, and social responsibilities to children and aging parents (Wolfe & Kolb, 1980). When career development is primarily organization-centered it can be defined as an organized, formalized, planned effort to achieve a balance between individual needs and organization workforce requirements. Organization career development integrates and links its activities with the human resource function of an organization and refines basic human resources activities (Leibowitz, Farren & Kaye, 1986). The program in this study views career development as individual-centered without a formal link to the human resource functions within the plant.

The current study was designed to evaluate the impact of a unique union-sponsored Career Development Program within the steel industry and reports the findings from a recently conducted impact evaluation. This Career Development Program is an example of a union-management partnership that is centered around work-life issues. Its beginnings can be traced back to the 1970s with the United Autoworkers and General Motors. This particular program is one of 52 national programs sponsored by the United Steelworkers and 13 participating steel companies with a yearly enrollment level of 34,000 employees and total funding approaching $120 million (Institute for Career Development, 1997).

The subject of this research is a Career Development Program that was created in 1992 at a steel company with 3,500 eligible employees. Participation in this comprehensive program is voluntary. Primary program services include tuition assistance, basic skills courses, pre-technical and trade training, computer training, personal development workshops, and career counseling. This program, in particular, has encountered tremendous challenges to its mission as a result of drastic organizational changes including a potential merger with a foreign steelmaker, department and position restructuring, the introduction of new manufacturing technology, and large-scale downsizing which eventually led to a complete plant shut-down in the first quarter of 1998. Apart from annual interest surveys and course evaluations, there was little information on what kind of impact this program had on the lives of its participants.

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Despite the local plant shut-down, a major obstacle to continued national growth and effectiveness in administering the more than 50 nationwide programs is the lack of a systematic evaluation model or framework. Only a small number of somewhat related programs have been studied to determine their impact, and most of this research has been associated with the United Autoworkers, General Motors Corporation, and the University of Michigan (Lawler, 1992). Furthermore, regardless of the methods of evaluation that practitioners may subscribe to, the majority of research relates to measuring training at levels that do not exceed participant reaction (Brinkerhoff, 1989; Holton, 1996; Kirkpatrick, 1994).

The lack of systematic evaluation within this national program, and specifically at this steel plant became the impetus for this initial study. This study focuses on post-participant reactions, participant perceptions of learning, the extent to which skills and knowledge improved, and the application of these skills in new settings. It is the first attempt within the steel industry to evaluate a Career Development Program based on a review of research literature surrounding union-sponsored career development activities.

Purpose of the Study

The purpose of this study sought to evaluate the impact of a multi-service career development program on its participating employees as they experienced the results of organizational restructuring, downsizing, and finally, plant shut-down. Specifically in this study, impact referred to the employees' perceptions about the effect their participation in the program had in four areas: their past job at the steel plant, their transition period following lay-off, their new job, and social roles and interactions.

Research Questions

This study is guided by the following questions:

1. What was the initial reason for employee involvement in the program?
2. Did anyone encourage employees to get involved in the program?
3. Did any barriers restrict greater employee involvement?
4. What career development activities had the highest levels of participation?
5. Did participating employees believe their participation had a positive impact on a) their past job, b) their transition period immediately after lay-off, c) their new job (if applicable), and d) their social roles and interactions?
6. Did a participant's educational level or job classification make a difference in their perception of a positive impact?

Additionally, it was anticipated that this research could offer a profile of the typical active Career Development Program participant within this national union-sponsored program.

Methodology

This study used a descriptive survey research design. A questionnaire was developed to address each of the research questions. The questionnaire was divided into four major sections: Participant Information, Program Services, Program Impact, and Personal Experiences. The Participant Information section included demographic information, and questions relating to reasons for initial program involvement, encouragement by others, and reasons for not getting further involved in the program. The Program Services section attempted to ascertain the services most used by this target population. The Program Impact section included 24 personal development statements associated with job responsibilities at the steel plant, during the transition period, on a new job, and social roles and interactions. The Personal Experiences section offer participants the opportunity to describe how the program impacted their life, how the program could be improved, and what was most valuable about the program. These items were measured using Likert scales, multiple choice, and open-ended responses.

The survey instrument was piloted with a random sample of 5 participants from the target population of 129 active participants. This target population was selected by including employees who had participated in two primary services of the program: tuition assisted courses and on-site, customized courses over a two year period. Because of their demonstrated participation, it was anticipated that this target group would have the best overall understanding of the program mission and services. After a debriefing with each member of the pilot study one-on-one and in a group, a final survey instrument was compiled that incorporated their recommendations regarding question order and terminology.

The survey was administered to a non-random sample of 129 members of the target population of a most active participants. Surveys were coded for tracking purposes. A self-addressed, postage paid envelope accompanied the confidential survey to enhance the response rate. A follow-up mailing was done 3 weeks after the initial mailing. A total of 83 surveys were received during a 6 week period yielding a 64% response rate. It should be noted that the plant shut-down occurred during the implementation of this questionnaire.

Data from the survey were analyzed both quantitatively and qualitatively. Survey responses were entered into a microcomputer spreadsheet in the order they were received. Descriptive statistics including mean, standard deviation, frequencies, and percentages of the data were calculated . The frequencies were rank ordered to identify their relative importance. Correlational analyses were also conducted to determine the relationship between perceived impact and both educational level and job classification. Responses to open-ended questions on the survey were thematically analyzed, however, this paper reports the findings from the quantitative analyses.

Findings

The major findings of this study are organized and presented in the order of the research questions:

Question 1: What is the initial reason for employee involvement in the program?

This question seeks to understand initial employee involvement before the fate of the plant became obvious. Table 1 depicts the reasons for the initial involvement with frequencies and percentages for each response. As shown, the overwhelming reason for participation was to prepare for a job in another industry. Other primary reasons for participation included preparing for company-sponsored training and preparing for retirement.

Table 1. Reasons for Initial Program Involvement (n=82)

	Frequency	Percentage
Prepare for a job in another industry	68	82.9
Prepare for company-sponsored training	28	34.1
Prepare for retirement	27	32.9
Prepare for transfer or promotion within the company	18	22.0
Discover a new hobby interest	11	13.4
Meet new people or socialize	10	12.2
Brush-up for a college course(s)	5	6.0
For general knowledge or just enjoy learning	4	4.9
To complete a college degree	4	4.9
Wanted to get my GED	3	3.7

Question 2: Did anyone encourage employees' involvement in the program?

This question examined the extent to which employees were encouraged by others to become involved in this program. Table 2 reveals that nearly one-third of participants did not respond to this question. It is possible that for some individuals, self-realization and motivation were sufficient to get involved in the Career Development Program, however, given the responses, this is purely speculation. For others, the encouragement from friends, family and role models may be needed to move from contemplation of potential program benefits to active involvement. Co-workers encouraging employees to become involved in this program was the primary response cited in the survey.

Table 2. Individuals Who Encouraged Program Involvement (n=52)

	Frequency	Percentage
No response	32	61.5
Co-worker	28	53.8
Union representative	18	34.6
Spouse or family member	18	34.6
Company representative (other than foreman)	11	21.2
Program staff or instructors	3	5.7
Foreman or supervisor	2	3.8

Question 3: Did any barriers exist that prevented greater program involvement?

This question examined the potential barriers that employees perceived to be impediments to becoming more involved in the program. Table 3 indicates that while several barriers were perceived to prevent greater participation, almost one-half of respondents indicated they were as involved as they wanted to be. Work shifts were deemed the primary impediment to greater involvement. This is not unusual in a three-shift production environment.

Table 3. Types of Barriers Preventing Greater Program Involvement (n=74)

	Frequency	Percentage
I am/was as involved as I wanted to be in the program	33	44.6
Work shifts	20	27.0
Overtime	12	16.2
Too busy looking for a job	11	14.8
Worried about possible transfer to another plant	10	13.5
Confused about which courses/programs to take	9	12.2
Program no longer offered anything of interest to me	4	5.4
Health condition of myself, spouse, or family member	4	5.4
Spouse or family did not support my involvement	0	0.0

Question 4: What career development activities had the highest levels of participation?

This question was intended to measure the level of activity in other areas of the program. The program offers a wide variety of training and development services which include on-site courses, tuition assistance, career counseling, career and educational resource material, computer facilities, and staff support. Information regarding enrollment in on-site courses and tuition assistance is tracked separately in a program database. Table 4 depicts the 11 activities there were included in the survey. Respondents rated each activity on a Likert scale from 0 to 3 (0 indicated no participation and 3 indicated a high level of participation). The highest responses provided by participants are associated with information provided by the program staff, career days which highlight high-demand occupational areas and related educational opportunities, and annual interest surveys mailed to each eligible employee.

Since career development treats the progression of jobs in one's lifetime and issues dealing with work/life balance, the following four areas were included in the survey to get a broader view of the program's impact on each participant: past job, transition period, new job (if applicable), and social roles/interactions. Each area or dimension of career development has six concrete examples which attempt to define the meaning of the dimension. Respondents are asked to rate each example on a Likert scale of 0 to 3 (0 indicated no impact and 3 indicated a high level of impact). The rank provided with each example is the overall rank based on 24 total examples regardless of dimension.

The first dimension examined the impact of the program on the participant's job within the steel plant. This dimension measured the most immediate impact the program was likely to have on a participant's daily work responsibilities. Table 5 shows that the program had the lowest overall impact on this dimension. The highest response within this area was attributed to the program helping a participant seek more challenging work assignments.

Table 4. Rank of Program Activities Other Than On-Site Courses and Tuition Assistance (n=81)

	Mean	SD
Information from program staff	2.17	0.84
Career Days	2.16	0.95
Annual interest surveys	1.59	1.15
Education Fairs	1.47	1.16
Job Search Information	1.41	1.09
Computer lab activities	1.24	1.02
Resource library	1.09	0.98
Career counseling	0.88	0.93
Education referral network	0.62	0.80
Summer workshops on personal development topics	0.59	0.89
Study groups and/or Tutoring services	0.51	0.87

Question 5: Did participating employees believe their participation had a positive impact on a) their past job, b) their transition period immediately after lay-off, c) their new job (if applicable), and d) their social roles and interactions?

Table 5. Rank of Examples Associated with Impact on Past Job (n=82)

	Mean	SD	Rank
Seek more challenging work assignments	1.46	1.14	18
Think of better ways to do a task or project	1.40	1.10	19
Increase the effectiveness of my communication skills	1.37	1.08	20
Work better with my co-workers	1.35	1.03	21
Listen to and follow directions on the job	1.27	1.12	22
Manage my time better on the job	1.24	1.09	24

The second dimension looked at the impact of the program in the transition phase immediately following job separation. This dimension included retraining and job search activities to help participants recognize their transferable skills and unique experiences. Out of the four dimension, this dimension ranked second in overall impact. Table 6 shows that the program most helped participants understand local job conditions and trends.

Table 6. Rank of Examples Associated with Impact on Transition Period (n=77)

	Mean	SD	Rank
Understand local job conditions and trends	2.31	0.67	3
Improve writing skills for resumes and applications	2.23	0.93	8
Develop an educational plan to learn new job skills	2.18	0.72	10
Develop a plan to identify/select the best job prospects	2.17	0.85	12
Contact potential employers & interviewing skills	2.17	0.67	11
Improve reading skills for use in retraining activities	1.94	0.94	14

The third dimension focused on the participant in their new job, if applicable. At least 53 respondents answered these questions. This dimension ranked first in overall impact. Table 7 shows that the program helped participants in a new job seek more challenging work assignments.

Table 7. Rank of Examples Associated with Impact on New Job (n=53)

	Mean	SD	Rank
Seek more challenging work assignments	2.39	0.75	1
Increase the effectiveness of my communication skills	2.33	0.67	2
Listen to and follow directions on the job	2.26	0.78	5
Think of better ways to do a task or project	2.26	0.67	4
Manage my time better on the job	2.23	0.79	6
Work better with my new co-workers	2.19	0.95	9

The fourth dimension looked at a participant's social roles and interactions. This dimension was included to satisfy the work/life balance associated with career development programs. Another reason to into account those participants who sought retirement or not an immediate transition into a new job. Out of the four dimensions, this one ranked third. Table 8 shows that the program most helped participants use a computer to learn new things.

Table 8. Rank of Examples Associated with Impact on Social Aspects (n=70)

	Mean	SD	Rank
Use a computer to learn new things	2.23	0.91	7
Improve readings skills at home	2.04	0.86	13
Try new hobbies or leisure activities	1.91	0.96	16
Enhance my role as a spouse or parent	1.91	0.82	15
Become a smarter, more informed shopper or customer	1.61	0.89	17
Increase my involvement in church/community group	1.24	0.94	23

Question 6: Did a participant's educational level or job classification make a difference in their perception of a positive impact?

Survey data were analyzed for correlations that may exist based on a participant educational level (low grade indicates less than or equal to 12 years of formal education and high grade indicates more than 12 years of formal education) and job classification (craft job position versus non-craft job position). Perceived impact differences according to educational level were noticed in the following items: challenging work assignments on the past job, listening and following directions on the past job, managing time on the past job, improving social reading skills, and attempting new hobbies/leisure interest. Perceived impact differences according to job classification were noticed for challenging work assignments on the past job and listening and following directions on the new job. Table 9 lists mean scores indicating any amount of perceived impact for total respondents group, educational level subgroups, and job classification subgroups.

Table 9. Perceived Impact by Percentage Comparing All Respondents with Educational Level and Job Classification Subgroups

On the Past Job	All Responses	Low Grade	High Grade	Non-Craft Job	Craft Job
Challenging work assignments	67.0	71.1	56.5 *	77.4 *	60.7
Think of better ways to do a task or project	68.2	71.1	60.8	74.1	64.7
Communication skills	62.1	64.4	56.5	67.7	58.8
Work better with co-workers	65.4	67.7	59.0	70.9	62.0
Listen and follow directions	70.7	66.1	82.6 *	67.7	72.5
Time management	69.5	76.2	52.1 *	77.4	64.7
Transition Period					
Understand local job conditions and trends	98.7	98.1	100	96.6	100
Improve writing skills	94.8	92.7	100	90.0	97.8
Develop an educational plan	90.9	87.2	100	83.3	95.7
Develop a job search plan	92.2	92.5	91.3	93.3	91.4
Interviewing skills	96.2	94.5	100	96.5	96.0
Improve reading skills	92.3	92.7	91.3	96.5	89.7
On the New Job					
Challenging work assignments	100	100	100	100	100
Think of better ways to do a task or project	100	100	100	100	100
Communication skills	96.2	94.2	100	93.3	97.3
Work better with new co-workers	96.2	94.2	100	93.3	97.3
Listen and follow directions	90.5	85.7	100	80.0 *	94.7
Time management	96.2	94.4	100	93.3	97.3

Social Roles and Interactions					
Use a computer to learn new things	92.8	90.0	100	95.0	91.6
Improve reading skills at home	75.7	72.2	87.5 *	76.6	75.0
Try new hobbies or leisure activities	87.8	83.3	100 *	90.0	86.3
Enhance role as spouse or parent	94.8	92.4	100	93.1	95.8
Smarter shopper/customer	88.4	85.4	95.6	90.0	87.5
Increase church/community participation	91.3	93.1	86.9	96.7	88.0

* differences between subgroup and total responses more than 10%

Discussion

Some of the findings of this exploratory study support current research in the adult education literature. Specifically, the primary reasons articulated by participants for their initial participation in the program mirror the participation literature which suggests that employment-related motives, social interaction, and learning for its own sake are reasons often given for participation (Merriam & Caffarella, 1999). Additionally, the barriers cited most often for nonparticipation include lack of time and lack of resources (Merriam & Caffarella, 1999). In terms of this study, lack of time featured among the participants' responses for not becoming more involved in the program.

With regard to the specific activities comprising each of the four dimensions, more than 95% of respondents indicated that the program made an impact in the following ways: thinking of better ways to perform their new jobs, being able to communicate their experiences and knowledge on their new jobs, being able to understand local labor market conditions, developing an education plan to learn new skills, and accepting more challenging work assignments on their new jobs.

In terms of the four dimensions examined in the study, the findings suggest that the highest level of impact was associated with the period in which respondents were employed in new positions following the plant shut-down. The lowest level of impact was associated with previous positions held at the steel plant. The transition period and social roles/interactions each had moderate levels of impact.

When overall program activity was analyzed according to participant demographic information, only education level made a difference. Respondents with lower educational levels believed the program made more of an impact on their jobs at the steel plant, and those with higher educational levels believed the program made more of an impact in their social lives and interactions. When differences in job classification were analyzed, non-craft respondents reported the program made more of an impact when thinking of better ways to do their past jobs, and craft respondents reported more of an impact on developing better co-worker relationships in their new jobs.

Limitations

Despite the exploratory nature of this initial study, there are several limitations. The use of a non-random sample of 129 active participants certainly warrants caution and precludes generalizability. The use of active participants may also introduce response bias. Additionally, this instrument assesses participant reactions to training interventions, and reports employees' perceptions of long-term learning and potential transfer. Ideally, a comprehensive survey of all past and current program participants or all eligible employees would have been preferred. Both were deemed too unwieldy because of cost, time, and the relocation of former employees following the plant shut-down.

Conclusions

This study represents the first research attempt to evaluate a national, union-sponsored Career Development Program within the steel industry. Although caution needs to be exercised in interpreting these findings beyond this one steel plant which has since been closed, this research provides a foundation upon which future studies can be

built. Specifically, future research initiatives could extend this initial study by broadening the population to include participants in other programs throughout the steel industry.

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The Superiority of Employee-Owned Companies: Reality or Myth?

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This study examined cultural strength of eight manufacturing firms in Ohio by use of questionnaires and discussion with company representatives. Half were employee-owned (ESOP), the other half proprietary or publicly-held. ESOP firms were expected to demonstrate stronger cultures due to employee involvement in managing the business; results indicated non-ESOP firms had stronger cultures instead. Differences among ESOP firms are examined and common assumptions about ESOP firms are analyzed. Suggestions for HRD approaches in newly formed ESOP firms are offered to promote successful transition to employee ownership.

Keywords: Organizational Culture, Employee Ownership, Employee Involvement

The past 25 years have seen dramatic growth in the number of employees and private sector organizations embracing employee ownership. This concept is intuitively attractive and appears consistent with current emphases on employee involvement in decision making, teamwork, democratization of the workplace, and strategies to promote employee motivation and high performance. What are the cultures of these firms? Are they demonstrating the characteristics of high performance and democracy touted in current literature?

This study examines the organizational cultures of four firms with employee ownership; similar data are collected and compared for four similar manufacturers who are privately held/proprietary. We expected to see clear advantages of employee ownership with improved performance results, as well as stronger culture factors. The results were surprising and have important implications for human resource development professionals.

Theoretical Framework

Employee Ownership (ESOP)

A number of studies have compared employee-owned firms to comparable nonemployee-owned companies. Employee ownership contributes to greater efficiency (Berman, 1967), productivity (Swad, 1982), employment growth (NCEO, 1995; Rosen & Klein, 1983), sales growth (Quarrey, 1985), and higher pay (Kardas, Keogh, & Schiff, 1998).

The Employee Ownership Index is an index of 357 public companies with 10% or more employee owners which benchmarks the impact of employee ownership among publicly-traded firms. The Index has outperformed other indices of stock market averages since 1991 (Gates, 1998). A closer look at firms included in the Employee Ownership Index shows publicly-traded firms with 20% or more employee ownership are more stable organizations (Blair, Blasi, & Kruse, 1998) and suffer less disruption due to bankruptcy, liquidation, and private buyouts. Among employee-owned firms, the percentage of stock ownership by nonmanagerial employees is a factor linked to higher performance. Sales margin in an earlier study correlates positively and significantly to the percentage of nonmanagerial stock ownership (Conte & Tennenbaum, 1978). Employee ownership does appear to make a favorable difference in company performance.

Employee participation combined with employee ownership is a significant factor in productivity increases. The General Accounting Office conducted several studies to measure the productivity of ESOPs. ESOP adoption did not improve productivity and performance except in firms which established structures for participation. Employee involvement in decision making contributed positively and significantly to productivity (GAO, 1987).

Research of ESOPs in Ohio (OEOC, 1993) show similar trends in terms of job growth and company performance as reflected in national studies: 41% of respondents increased employment, 22% reduced employment,

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and 37% showed little change. In comparing these results within their industries: 49% of ESOP firms performed better than their peers, 50% performed as well, and only 1% decreased productivity.

Today, employees own stock in an estimated 11,100 U.S. businesses. There has been steady growth in the number of employee-owned firms since Congress created Employee Stock Ownership Plans (ESOPs) through ERISA legislation in 1974. The National Center for Employee Ownership (NCEO) has estimated the number of ESOP and stock bonus plans at 1,600 in 1975, 6,000 by 1985, 10,000 by 1995, and over 11,000 in 1998. The number of employee participants in these plans has grown from an estimated 248,000 employee participants in 1975 to approximately 7.7 million in 1998. The assets of these plans are estimated to be worth about $400 billion. A 1992 survey conducted by the Ohio Employee Ownership Center (OEOC) indicated that roughly 350 Ohio firms have established ESOPs representing an aggregate employment of about 300,000 persons and plan assets worth $4 billion.

The US Congress established ESOPs as a way to boost U.S. productivity, increase the retirement income of American workers, and encourage reinvestment in business and industry. Today companies with employee ownership can be found in every location, type, and size of business. While ESOP plans are found in public and private firms of all sizes, a majority of plans are established by small to mid-sized firms. The 1992 Ohio Study found 60% of ESOP companies had 150 or fewer employees, 20% had between 150-200 employees, and another 20% of these firms had over 500 employees. Nationally, most of the growth of ESOPs has occurred in smaller firms as well, according to the NCEO.

The creation of an ESOP often launches a process of cultural change, yet research suggests the transformation, especially among traditional, closely-held firms, is gradual and uneven. For example of Ohio firms surveyed, only 46% regularly provide employees with the company's financial statements, though another 28% of the firms provide financial reports upon request.

Organizational Culture

Assumptions about ESOP firms can also be viewed as demonstrating a stronger organizational culture within ESOPs compared to non-ESOP companies. Stronger cultures are defined as a set of homogenous values and beliefs shared by members of an organization (Deal & Kennedy, 1982; Sathe, 1983; Schein, 1985) or shared practices (Hofstede, Neuijen, Ohayu, & Sanders, 1990). Strong cultures serve to increase commitment to the organization (Ouchi, 1980), increase productivity (Deal & Kennedy, 1982), and create effective communication practices (Schein, 1985).

Sathe (1983) suggested that culture affects the behavior of organizations relative to cooperation, commitment, communication, decision making, and decision implementation. Schein (1983) argued that organizations develop a culture to create a common vision and goals individuals identify with. Weick (1987) suggested culture helps people develop a sense of trust and confidence in each other's actions. Hofstede et al. (1990) suggested culture is manifested in the daily practices of organizations. Thus research into the culture of any organization can be approached by learning about practices relative to communication, decision processes, cooperation, vision and goals, trust, commitment, and shared ideas.

Research Questions/Hypotheses

The primary research question which emerged from the theoretical framework of this study was "Do ESOP companies possess stronger cultures than non-ESOP companies due to greater involvement of employee owners in managing the business?" From this question several hypotheses emerged: (a) ESOP companies will possess stronger cultures than non-ESOP companies, (b) ESOP companies which are majority-owned by employees will have stronger cultures than those which are minority employee-owned, and (c) majority employee-owned firms will demonstrate greater employee involvement in decision making than minority-owned companies.

Instrumentation

The Organizational Culture Questionnaire (OQC) was used to collect data for this study. The OCQ contains 62 short statements that describe nine culture factors. These nine factors and the reliabilities are as follows (a) Teamwork (.82), (b) Trust (.70), (c) Risk (.64), (d) Communications (.81), (e) Decision Making (.69), (f) Change (.82), (g) Responsibility (.76), (h) Vision (.52), and (i) General Organizational Issues (.12). The overall reliability for the

instrument as a whole was .95. The OCQ has been used in the private sector, in healthcare, and in schools. A pilot study was conducted at two plants of a large manufacturing firm to obtain reliability data (N=319). Respondents were asked to use a Likert Scale indicating the extent of agreement with each of the 62 statements, e.g., 1 = Very Little Agreement, 3 = Moderate Agreement, 5 = Great Agreement. Strength of culture is measured by scores reflecting greater agreement with statements, e.g., 1 or 2 = weaker culture, 4 or 5 = stronger culture. The instrument has construct validity. In a study of six middle schools comparing established and emerging "middle school" characteristics, the Questionnaire distinguished significant differences between group statistics.

Sample

Data were gathered from eight companies who were contacted and agreed to participate. Four of these were employee-owned and were participants in a network of such companies. Four were proprietary or publicly-owned but were not employee-owned. To legally be classified an ESOP, a company must have at least 20% employee ownership. All eight companies were manufacturing firms located in Ohio, U.S.A. In the study sample, ESOP ownership varied from less than 30% to 100%. A total of 682 Culture questionnaires were completed from a possible 1,681 employees from the eight companies for a response rate of 40%. For six of the eight companies, Culture questionnaires were collected on site by the researchers. In the remaining two companies, questionnaires were distributed by company officials and returned by mail.

Results

The Neuman-Keuls Analysis

The Neuman-Keuls analysis provides a method of comparing differences among pairs of organizations. While the original study design anticipated such differences would be between employee-owned (ESOP) and nonemployee-owned (non-ESOP) companies, the analysis also provides data regarding significant differences between all possible pairs, i.e., differences between (a) ESOP and non-ESOP, (b) ESOP and ESOP, and (c) non-ESOP and non-ESOP pairs. This distribution of significant results, although not anticipated in the study design, provides understanding of ESOP and non-ESOP culture comparisons.

Results from Table 1 indicate three ESOP companies had scores in the lower half of the sample of eight. Non-ESOP companies, in contrast, had three of the highest scores. Neither company B or C, which are 100% employee-owned, had scores in the upper half of the score set. Company B had the lowest total score (2.86) among the eight companies. Based upon the theoretical discussion and the ensuing hypotheses, one would expect the ESOP companies to have higher mean scores than their non-ESOP counterparts. Further, one would anticipate the majority-owned ESOPs would have higher mean scores than the minority-owned companies. These results failed to support higher ESOP mean scores overall and higher scores for majority-owned firms.

Table 1

Total Mean Culture Scores, Percentage of Employee Ownership of ESOP Companies

Company	M	% Employee-Owned
A (ESOP)	2.92	33%
B (ESOP)	2.86	100%
C (ESOP)	3.07	100%
D (ESOP)	3.23	<30%
E	3.48	
F	3.15	
G	3.08	
H	2.89	

For the ESOP and non-ESOP comparison, in three cases, there were significant differences between group pairs. However, for two of the three, the non-ESOP companies had higher culture scores than the ESOP companies. In four other comparison pairs the differences were between ESOP and ESOP companies (A vs. D, B vs. D) or between non-ESOP and non-ESOP (F vs. G, E vs. H). Company D, as a minority ESOP, scored higher than expected compared to the majority ESOPs (B and C) (see Figure 1).

ANOVA	F = 4.16 F prob. = .0002	Significant at .05 Level

Newman-Keuls

M		ESOP				non-ESOP			
		A	B	C	D	E	F	G	H
2.92	A								
2.86	B								
3.07	C								
3.23	D	x	x						
3.48	E	xx	xx						
3.15	F								
3.08	G					xxx			
2.89	H				xx	xxx			

x = pairs of significantly different scores within ESOPs. xx = pairs of significantly different scores, ESOP and non-ESOP comparisons. xxx = pairs of significant difference scores within non-ESOPs.

Figure 1. ANOVA and Neuman-Keuls Scores: Total Culture Scores.

While no scores were significantly different within the Teamwork category, the expected difference favoring ESOP teamwork was surprisingly absent given theoretical basis for supposed ESOP superiority. While not significantly different from non-ESOP scores, three of four of the lowest teamwork scores were ESOP companies. In the category of Trust, six of eight significant differences between ESOP and non-ESOP companies demonstrated lower scores for ESOP companies. Only Company A's and D's scores were higher than Company H's score. All other ESOP scores were lower than non-ESOP companies. The results indicate six of seven significant differences

between ESOP and non-ESOP scores for the category of Risk. All but one of these differences showed lower scores for the ESOP companies. Results for the category of Communications were the only score set that had all companies at 3.00 or above. This suggests relatively stronger communications within all eight companies. ESOP companies A and B had the lowest scores and significant differences with Company E, which is non-ESOP. The results for the category of Decision Making indicate that among five significant differences between ESOP and non-ESOP companies, scores were lower than non-ESOP scores in all five instances. These results would seem to be contrary to theoretical framework that suggests superior ESOP performance is due to greater employee involvement in decision processes.

The results for the category of Change and Innovation show two instances of significant differences within the ESOP group (A and B vs. D) as well as three instances of significant differences between ESOP and non-ESOP groups (A and B vs. E, D vs. F). Company D had the second highest score among all eight companies while companies A and B had the lowest scores among the eight participants. Results from this comparison indicate one non-ESOP company as significantly different from all other ESOP and non-ESOP companies in this sample. Although not significantly different, ESOP scores for the category of Responsibility and Commitment represented three of the four lowest scores. As with several other culture categories, companies A, B, and C had the lowest scores while Company D scores were among the highest.

Of note in the results for the category of Vision and Goals are significant differences within ESOP companies (A and B vs. C, B vs. D) as well as between ESOP and non-ESOP companies. Again, three of four lowest scores in this category are from ESOP companies (A, B, D). Within the category of General Organizational Characteristics, ESOP companies A and B had the lowest scores. Significant differences were seen between companies E and H (non-ESOP) and companies A and B (ESOP).

Discussion

Results from this study indicate non-ESOP companies often possess stronger cultures than ESOP firms. This finding was contrary to expectations that ESOPs would possess stronger cultures (Berman, 1967; Estrin, Jones, & Svejnar, 1987; Swad, 1982). These results were especially surprising since the culture categories of decision making and communications demonstrated higher culture scores for non-ESOP companies. Given assumptions that employee ownership increases decision participation of worker owners and increases business-related communication, these results appear to contradict expectations.

The answers to these contradictory results may be explained by research about differences between ESOPs with formal employee involvement and those with no formal involvement. Research by the General Accounting Office (1987) demonstrated that ESOPs with formal employee participation in decision making had better productivity measures than ESOPs with no formal participation. A study by Moloney (1991) supported the results of the 1987 GAO study. The Moloney study also suggested a "frustration" effect occurs when employee financial participation is not accompanied by participation in decision making. This effect is shown by employee frustration and diminished performance. An earlier study by Cable and Fitzroy (1980) supports improved productivity of high participation employee-owned firms and reduced productivity for low participation employee-owned companies. These results are consistent with Moloney's findings regarding positive productivity for high involvement firms and a "frustration" effect for low participation firm.

A review of 20 years of research about employee ownership and performance by Conte (1992) supported employee ownership as contributing to productivity when accompanied by formal employee participation in decision processes. Conte's review also found the productivity of employee-owned firms without formal participation is no better or worse than non-ESOP companies.

Apparently employee ownership per se is not a single, causal factor in improved firm performance. The current study suggests the culture of ESOP companies is weaker than non-ESOP companies. Weak cultures could contribute to reduced company productivity (Deal & Kennedy, 1982). While the current study does not address firm productivity, it does support the notion that being employee-owned is not in itself an indication of strong culture.

Logue and Patton (1994) studied the reasons for failure and closure of democratically-run ESOPs. Several findings are of interest: (a) Democratic ESOPs were often created to "rescue" a threatened plant closure. Employees sacrificed financially to complete the buyout which provided ownership. Dual and conflicting goals of maintaining profitability and job retention often resulted. This is similar to the "frustration" effect described by Cable and Fitzroy (1980) and Moloney (1991). Conflicting goals may weaken the culture of these companies. Also, troubled companies that become ESOP remain troubled and exhibit weaker cultures, and (b) failed democratic ESOPs often had poor financial and marketing management. This may yield poor company performance, disruption, tension, and

turmoil which can further weaken culture. The expectations of employees who become owners is that democracy and democratic processes will result in their involvement in decision making (Logue, Glass, Patton, Teodosio, & Thomas, 1998). Legally and in practice this "democratizing" may not occur when a firm becomes ESOP. Unmet expectations may contribute to frustration and a weaker culture.

Several factors appear to impact ESOP organizations to, in fact, create a weaker culture. Lack of employee participation in decision making, conflicting goals, weak competitive position at the time of becoming ESOP, and poor management may all individually or in combination contribute to a weaker culture and/or failure. The point of interest for HRD researchers and practitioners is a firm becoming or being employee-owned does not guarantee, in and of itself, participative practices or a strong culture. The current study suggests ESOP companies may have weaker cultures.

In addition to questionnaires completed by employees of the eight participating firms, discussions were held with managers of ESOP companies to the extent of relative employee participation in decision processes. An analysis of the four ESOP companies which participated in this study relative to percentage of employee ownership and employee participation in decision processes indicated the following: (a) Company D, which had the lowest percentage of employee ownership (< 30%) and the highest culture scores, did not have employee participation in decision processes; (b) Company B, 100% employee-owned, had limited employee involvement in decision making and the lowest culture scores of the four participating companies in this study; (c) Company C, 100% employee-owned, had moderate employee involvement in decision processes and the second highest overall culture scores among the four ESOPs in this study; and (d) Company A, which is 33% employee-owned, had moderate employee involvement in decision making and lower culture scores than Company C or D. In summary, no clear pattern emerges among these companies based upon percentage of employee ownership, participative practices, and culture scores.

Conclusions

Organization theory, particularly postulation regarding the nature of culture, participation, worker motivation, and productivity points to employee ownership as a potentially powerful tool to influence positive culture and operating characteristics. Specifically this research was based upon a belief that employee ownership would create firms with stronger culture than for those without employee ownership. Similarly, the greater the percentage of employee owners the more positive would be the effects on culture. Despite a relatively small sample of organizations, the samples were robust and the results were clearly different than anticipated.

We conclude the idealistic projections based upon literature and even existing ESOP research were not supported by our real world data. The variations in "why companies become employee-owned" appear to far outweigh or influence the culture of the ESOP organizations we studied than the social psychological constructs found in texts and journals. Stated differently, organizations become employee-owned for a number of reasons, several of which are not based upon increasing employee motivation or upon sound management principles. Walking into many ESOP organizations would not be different from observing other struggling small businesses, with autocratic leaders and practices, highly hierarchical structures, and little horizontal or upward communication. In practice, being employee-owned does not ensure greater involvement of employees, better informed employees, or employees who are happy with their work and managers.

These results have important implications for HRD professionals. These are (a) Employees embarking on employee ownership require an accurate sense of what such provisions mean to them. Assumptions should be clearly articulated and discussed. (b) The participative structures available to employees should be spelled out in advance and be clearly understood. (c) Open communication should be encouraged and available about operating conditions and variation, and (d) Economic education should be provided to enhance realistic expectations about the job and about prospects for economic growth and profitability. Finally, this research can be viewed as just scraping the tip of the iceberg. Additional study and research is needed to confirm the variation in these findings and to study the effects of controlling critical variables.

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Recruiting and Retaining Women in Business: Women Executives Maneuver To Change the Status Quo

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Preliminary focus group research findings are shared for a group of executive women in a Fortune 500 consumer products company who are working to advance women in their organization. The findings include challenges related to the recruitment and retention of women, and the awareness and actions underling executive women's work for organizational change

Key Words: Women's Development, Diversity, Career Development

Today, women comprise 46 percent of the U.S. workforce and 48 percent of the managerial and professional specialty positions (1996, Bureau of Labor Statistics). Working women occupy positions from line workers to CEO's. Yet, women's presence at the top ranks of business has remained stagnant over the last ten years, fluctuating between three to five percent (Eller, 1991; Feminist Majority Foundation, 1991; Powell, 1993). Although women's workforce participation has steadily increased and shows no sign of diminishing on the eve of a new millennium, they lag behind men in pay, promotion, benefits and other economic rewards (Knoke & Ishio, 1998). Despite the progress over the last fifty years, about half of the world's workers are in sex-stereotyped occupations and women work in a narrower range of occupations than do men. A few women have broken through the proverbial glass ceiling, yet, many bump into it. Corporate culture has proven resilient to women's advancement throughout history, because it is typically designed and controlled by a homogenous group of white males (Ruderman, Ohlott, & Kram, 1995; Sharpe, 1994). Women have identified being female and experiencing sexism as the greatest obstacles to advancement (Korn/Ferry and UCLA, 1993), and Tharenou, Latimer, and Conroy observe that, "A male managerial hierarchy is thought to be a critical feature influencing the processes affecting men's and women's managerial advancement" (1994, p. 901). Further, the structure of primarily male managerial hierarchies tends to decrease women's career encouragement and training (Tharenou, Latimer, and Conroy, 1994), and women are expected to demonstrate personal strength and prove themselves more extensively than men before being awarded promotions (Ruderman, Ohlott, & Kram, 1995).

While the prospects for women's advancement do not seem favorable based on the past, some daring executive women are maneuvering to assure change in the future. This study examines their process and results. The theoretical frames underlying this study draw on women's career development and adult learning. Career development literature sheds some light on how adults progress through their careers, but has been criticized for basing models on men's careers, and being insensitive to the multiple roles and responsibilities of women across their life span.

Research Questions

The purpose of this study was twofold. The primary purpose was to identify issues related to the recruitment and retention of women in a *Fortune* 500 consumer products company. The question was based on the company's assumption that it was doing poorly in creating an atmosphere that attracted women. The secondary purpose was to understand how executive women navigate through an endeavor that addresses organizational inequalities in the company. Questions driving this study included:

1. What are the variables contributing to the recruitment and retention of women in the company?
2. How does a group of executive women maneuver through an initiative to improve the status quo for women?

Methodology

Study questions were investigated via a qualitative approach, the primary data collection method being a focus group. The purpose of the focus group was to engage the executive women of the organization in a conversation about the issues of recruitment and retention of women in the company. The focus group participants were primarily executives, and all of them attended the 1998 Catalyst Awards meeting in New York City. Catalyst is a

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non-profit organization founded in the sixties by Felice Schwartz. Its mission is to work with for-profit business to advance women in the workplace. The focus group following the Catalyst event, and launched a more long-term diversity initiative and research project than is presented here. This study is unique as the top woman executive of this organization commissioned it. This project is not without risk, and the company and participants shall remain anonymous. I have privileged access to this group and serve as its facilitator.

Data Collection and Analysis

A semi-structured interview or question guide was developed and reviewed with the Vice President of Human Resources in advance of the focus group meeting. The focus group questions were:

1. What are some of the assumptions made about women in the company (by both men and women)?
2. What attracts women to the company?
3. What causes women to leave the company?
4. What causes women to stay with the company?
5. What are some strategies for addressing the organizational issues raised?
6. What actions need to be taken immediately? Long term? By whom?
7. Where do we go from here?

During the focus group, the executives raised and prioritized issues. The three-hour focus group was tape recorded and transcribed verbatim by a transcriptionist yielding 50 pages of single-spaced text. Anonymity of responses was assured with all findings of the study reported as aggregate data. Names of individuals and business units were removed from the analysis. Tapes and transcripts were supplemented with notes and correspondence generated between the Vice President of Human Resources and me. An inductive approach was used for this analysis, also know as constant-comparative analysis. The data were evaluated for common themes, stories and clusters of information. Through constant comparison of themes, categories were derived inductively. The findings were shared with all participants and have been used as a map for further efforts which will be described at the end of this manuscript in the "next steps" section. The limitations of this study include that it represents a single corporation and the results may not be generalizable to corporate America. The focus group methodology may have influenced the data shared. The focus group required these women to risk sharing on a topic that had never been discussed formally in the organization. Individual interviews may yield different information and are planned for 1999.

Findings

Data analysis is still underway, but themes have been identified for the two streams of inquiry in this study. The executive women identified several challenges related the recruitment and retention of women in the organization. Two themes emerged regarding how a group of executive women learns and navigates through an initiative to improve women's status: (a) Awareness of self and the organization; and (b) action to change the status quo. Each of these categories will be discussed.

Challenges Related to the Recruitment and Retention of Women in the Company

Issues related to recruitment and retention were organized according to the following sub-categories: lack of leadership, lack of strategy to improve representation, different rules for women and men, low flexibility, minimal diversity, few developmental opportunities or plans, and mis-aligned value systems.

Lack of Leadership

There was a sense that management had not shown enough leadership in making diversity a strategic imperative for the business. One participant noted, "Women who are relatively new, leaving after a year or two years or less time than that, because of poor management and leadership." Although the participants generally agreed that leadership was lacking as far as minorities and women were concerned, there was agreement that leadership in recruitment and retention needed to focus on all employees, not just men or not just women.

The Rules are Different for Women

A recruiting challenge raised was that the rules of the game differ across gender lines. One executive complained, "It is my perception that we do try hard, we do put more into it, and need to, to get [ahead]." The concluding sentiment was that women must work harder and longer than men to achieve executive positions.

Low Flexibility

Levels of work flexibility vary across the corporation. The prevailing sense, however, is that there is not enough flexibility as evident by these comments, "We do not offer any type of flexibility, " or "We have complete inflexibility about hours." One of the executives who is a new parent recalled, "Day one, when I talked to my boss and he said 'it's eight to six,' and I said 'well how about seven to five,' and he said, 'no, it's eight to six and I really mean it'." This group had little hope about alternative work arrangements, such as working from home.

Minimal Diversity

Lack of diversity was cited frequently. There was frustration about the small representation of women and minorities in upper management, and lack of management action to change this trend, "The fact that [there is] only one woman of color on our management team at all is scary."

Lack of Strategy to Improve Representation

The absence of a plan to improve company representation of women and minorities was raised several times. Here is a sampling of what the participants had to say about this challenge: "I don't think that we're any better recruiting women than men." "I can't think of any specific policies or procedures that we have in place in our organization that are directed towards women." "There really weren't any goals in terms of how many women do we want in these positions, how many minorities, how many real targets." "[There is a] lack of company data, to make any really informed decision". Further, succession planning in the organization was perceived as a group of white men non-systematically discussing people known to them.. As a participant noted, "I don't believe that there really is an all out effort to have representation goals."

Few Developmental Opportunities

The overwhelming sense was that no systematic career development process exists. Some participants have experienced being pushed into new positions with little guidance and low confidence that they are ready and they have been expected to survive as best they could. "I've been pushed into the next position, even though I know I'm not ready, yet, I've been expected to survive, make it, and succeed." "It's still a personal struggle for me, where I'm pushed before I'm ready to fly, and it remains to be seen, whether I'll survive it." This lack of developmental focus prevents women from learning about and training for opportunities across the company. When asked, "What attracts women to your company?" the reply was, "I would hope it is the same thing that attracts men to the company." The participants felt that opportunities were not well communicated in the company. Even though there was dissatisfaction at the level of communication about opportunities, everyone agreed that if opportunities to grow disappeared, they would leave the organization. "Whenever I've left somewhere, it's because the opportunities to continue to grow and learn, and feel empowered, have stopped." The unanswered question, however, is why did the opportunities stop for some of the women? No one attributed it to systemic discrimination of women, however, this question will be followed up in a future study.

Mis-Aligned Value Systems

In some cases, mismatched values presented another retention problem. The focus group expressed values of being continually challenged, and doing work that aligned closely with personal philosophy. No one expressed a current desire to leave, but it was clear that values were important in the following comments: "I don't feel compelled to leave the company, however, at some point, if I were to feel personally compromised . . . then I would leave immediately." Another shared, "I guess I'm getting older, and for me, the values of a company are so much

more important." Another observed, "What has been able to keep me retained, so to speak, is enjoying my work. And then, hopefully, it's in an organization that has a value system that supports my philosophy."

How Women Executives Navigate through Change Initiatives

The assessment of how a group of executive women navigate through a change initiative yielded two themes: (a) awareness self and organization, and (b) action to change the status quo.

Awareness of Self and Organization

The women had a keen sense of their surroundings and spoke about the realities their experience. They shared insight into the organization and themselves.

Inhospitable Environment

The women spoke about the work environment as sometimes being inhospitable to executive women. They identified certain attributes that influence both women's career experiences and decisions to leave. These include better opportunities elsewhere, inflexible working hours, non-recognition of accomplishment, poor leadership and supervision, isolation, and differences between the way executive men and women are treated at the company. One example of different treatment was relayed in a perception that not all-male colleagues are accustomed to dealing with women in executive business roles. As one participant observed,

> [Men] are not accustomed to, women [executives], and therefore, they tend to relate to a female peer in the same way that they would relate to their wives, and so, besides trying to do your work, you're also educating them on how to relate to you as a business peer.

The environment also made it harder for women to learn the rules of the culture, and sometimes the women felt isolated. The observation of women who were not successful was, "technically, they were good in their area, but at least one of the things they lacked was knowing how to get around in the company, in the network." The unsuccessful were described as not understanding how to work the system. The women thought a lack of a peer, mentor or confidant at the executive level contributed to failure. The group identified the need for a safe forum to share, learn and vent. A recurring metaphor of the isolation that some of the women felt was iterated through the image of a woman sitting on the edge of her bed wondering if she could carry on. "This is the first company I've worked for where I've had the days that I sit at the edge of the bed and say 'why am I going in in the morning?' I've never had that experience anywhere else." This moment of contemplation resonated with the group as another participant explained:

> So when you're sitting on that bed, not wanting to get out, what you're doing is reflecting on that situation so that you can name it. And then put together your strategies to get past it, and I think in the positions that those of us in the room have now, we are faced more so, with those situations that keep us on the beds some mornings, and sitting on that bed, is again, trying to name the situation, identify your strategies, and look at your exit card, to make certain that whatever is on that exit card, hasn't been played, and then think of your strategies when you go in.

Sense of Entitlement

There was also a belief that men felt "owed" advancement by virtue of their positionality in the culture. One participant observed, "I think men . . . have more of a feeling of entitlement in terms of advancement and promotability. . . . I just don't think women can take that for granted." Another executive noted that:

> Men seem to be upset if they don't get that promotion . . . it's not that they earned it and they deserve it, [but they feel] darnit, they really should have that. Whereas, I think women . . . feel more, 'Jeez it must be some shortcoming of mine. I'm not trying hard enough. I'm not doing enough.' It's more of an indoor pressure, and then the drive translates from that, as opposed to … 'they're wrong because they haven't given it to me.'

Pressure to Perform.

Not only do women put "indoor pressure" on themselves, they also get it from the organization. The participants described tremendous pressure to perform. The collective observation was that it takes women longer to achieve vice president status than men, and that women have to work harder to do it. Further, if women fail in their quest to succeed, it is viewed much more seriously than if men fail. It is generally felt that when men fail in the organization, it is not a notable event. On the other hand, when women fail it is a big deal. One executive observes:

> If that woman could [not] succeed she was weak. Now if a man doesn't make it, it doesn't matter, because if you have a hundred men, and one doesn't make it, that's okay. But if you have one woman who's a director and she doesn't make it, she was weak.

Fear of Misperception

Although these women were keenly aware of their environment, they had an interesting fear about their participation in the project to advance women in the company. They were anxious about being perceived as "recipe swapping male-bashers." This thought captures the sentiment, "I had a . . . concern that, . . . we've all participated in these kinds of things before, and [someone's] specific experience had been that they're either recipe swaps or male bashing," This woman went on to note how pleased she was with the process and that, "what we had here is clearly showing our level in business thinking, our sophistication as business people, and our understanding what the real issue is." Another woman shared,

> [My boss is] gonna ask me, . . .gonna put me in a room and say, 'what did they say, what did they do? You know tell me everything.' Not because he's suspicious, but he just has to have his hands in everything. I really was sort of expecting this to be, not necessarily a male bashing thing, but when I left the other day and [my boss] said, 'have fun, what do you think they're gonna do?' I said, 'I don't know, we'll sit around and say chicks rule,' but I really thought it was gonna be . . . less of a constructive thing, and I'm so impressed... you know some of you I work with, but others I have never met before, and you all are just so articulate, and so you know, just so incredibly impressive, so I'm so glad to be included in your little group.

Pioneering Spirit

These women regarded themselves as pioneers and role models for the future. They regularly referred to themselves as "pioneers" when they were speaking about their roles as executive women in the company. One woman reflected, "If women were to come [here], I think that they would have to like to be the pioneer, and if they didn't like that, then it's really not the place for them." Being a pioneer is not easy." One executive shared, "There certainly have been frustrations along the way, and . . . I've sat on the edge of the bed and said, "I just can't do this again." She felt her investment in her work kept her going, " When I'm siting here thinking, okay what made you get up and wash your hair and go into the office? . . . at some point you have an investment be it a personal investment, an emotional investment."

Solidarity

There was a strong disposition to take collective action devoted to women's advancement, for instance, "I'm a firm believer of the power behind the voice, that we've gotta sing off the same page." Beyond working together to support women's advancement, it was strongly held that there are sound business reasons for pursuing this initiative and that the company would suffer if no action is taken. The women also felt that they could convince the male executives that this was worthwhile by tapping into their competitive spirit, "So we've got that political mindset, and this is about power, [and] when it comes down to it, men see things competitively." Another observed, "It's all around power, and power's a relational concept, and I love it, I want it, and it makes good things." There was general agreement that this process could only be powerful, however, if the women worked in concert.

Action for Meaningful Change

The women were adamant about taking action and were not only thinking strategically about women's advancement, but also, about how to use the power of influential women in the organization to advance this initiative. A participant reflected about the outcome of the focus group's prioritized issues, "I think it's another example that shows how when women are given an opportunity, they are going to think holistically and be business minded, and the myth is that we're just going to take care of our nest." Toward the end of the focus group, the women complimented themselves on being strategic, as this woman noted, "Not one time during our interaction did we not focus on the success of the company as a whole, and how each one of our individual companies could contribute, and I would like that message to be clearly heard by senior management." Another comment was, "We are here because of a commitment to company performance." "By bringing forward what we have here, that's something that's not been done before that will increase market share. . . . We are an untapped resource." The focus group was highly proactive and creative in identifying actions that the company can take in this initiative to advance women. The issues were categorized initially in the focus group. The group prioritized issues and actions and created an action plan. The highlights follow.

Learn Where the Company Stands

The focus group participants wanted information. The group suspected that company performance in advancing women was below par, but facts and figures were not available. There was interest in benchmarking other companies to see how they approached women's advancement.

Secure Management Commitment

Like any organizational initiative, management support is imperative in effecting change. The focus group wanted to see evidence of commitment to this process. The fact that the meeting happened at all was a very encouraging step to the group. Next steps include acting on the actions specified and having a more visible management commitment in this effort. The sentiment was that this commitment is important to retaining key employees.

Create a Plan to Address Recruitment and Retention Issues

When a plan for advancing women was discussed, it was usually centered on "what is it?" The group consensus was that there is currently no plan and that a key outcome of this group's effort would be to develop and implement a plan for the advancement of women in the company. Measurables were called for as well. The women spoke appreciatively of getting the space to make mistakes, free from retribution.

Network

Building strong networks of support, both inside and outside the company was viewed as pivotal to success and necessary for balance. "I think one of the challenges that we as women have [is] as . . . you rise up in the organization, you see less of yourself."

Mentor

Mentoring is the classic developmental strategy, and this group viewed it as a critical developmental process. There was a sense that mentoring was a special responsibility of this group, particularly with women who are at earlier points in their careers. The notion of peer mentoring and learning from everyone in the organization was also discussed.

Cross-Fertilize

A recurring complaint was over little exchange in the company across divisions, whether in job opportunities or information sharing. The women felt that no cross-company commitment for people development existed and they called for more cross-company opportunity. This lack of exchange is viewed as a waste of available resources that may be putting the company at financial risk.

Capitalize on Diversity

There was unilateral support for using peer pressure and the drive to win, to get visibility and action for women's advancement. The women were not aware of any diversity initiatives as one noted, "I can't say that I'm aware of any sweeping initiative to help women." An even more cynical viewpoint about getting male buy-in to diversity was captured in this remark, "Sort of capitalize on that male, I'm the male, I wanna win thing . .. [because] this is a marketing issue."

Focus Group Follow-up and Next Steps

At the conclusion of the focus group, the women described some dynamics related to advancement in their company and established an aggressive response to the challenges. Since the initial focus group, this group has corresponded about the issue, held a strategic planning session, reviewed EEO (Equal Employment Opportunity) data, named itself "The Advisory Committee," established a mission, created an action plan for presentation to top management, and secured top management support to implement a policy for improving diversity. The next meeting in January 1999 will set the stage to solidify the group's efforts for the future.

Conclusions

Women's career development is a complex, diverse process. Women have made advances in United States organizations, but the consensus is that they have not scaled career ladders fast or high enough. The workforce is becoming more diverse, and it is in the best interest of the US economy to develop women in their careers. Yet, as Fernandez observes, "corporate America as a whole, has failed to effectively address the challenges posed by diversity, particularly with regard to racism and sexism" (1999, p. 3). While the landscape of career development is changing, problems like discrimination and equal access endure. While there are more women in positions of power in organizations, progress has been slow. In 1997, there were 61 female top earners in *Fortune* 500 companies out of a total 2,458 top earners. Women comprised 2.5 percent of the total (Catalyst 1997). This research has provided a glimpse into how executive women align themselves to address women's interests in the corporate setting. It has identified issues important to the career development of women from executive women's perspectives. It has offered several strategies for addressing the challenges of recruitment and retention of women in a tight job market. Finally, it offers an example of how corporate executive women are working to advance women in their own organizations. Yet, this is just one example of how women are working for change in organizations. More initiatives and research are needed to create equitable, accessible workplaces for an increasingly diverse workforce.

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Income Effects of Human Resource Development for Higher Educated Professionals

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This paper addresses the question of whether individuals benefit from participating in HRD-activities. In particular the questoin is addressed whether participating in these activities lead to a higher job level and/or higher income. The results, obtained through means of a path analysis and based on a sample of 1876 respondents, show that participating in HRD-activities has no impact on individuals job level and income. The reverse is the case for other variables included in the analysis, such as gender, level of initial qualification and work experience.

Keywords: Human Resource Development, Adult Education, Outcomes

Introduction and Research Question

Research into the relationship between educational level and income has a long tradition. The initial steps were taken in the human capital theory developed by Becker (1975). In this theory students are thought to be investors, making a choice between spending time on income-generating activities and spending time on educational activities. In line with micro-economic thought, it is assumed that the income received as a result of time spent in education is the benefit the student strives to maximize in order to maximize his utility. The main focus of studies using this framework has been to determine the actual returns of education to the individual. In the Netherlands an important contribution is delivered by Glebbeek (1993), who has developed and studied a model for estimating effects of education on career development. He has found that education has a direct influence on income (.35), and an indirect influence via jobs persons held in the past (.71), jobs they hold later in their career (.45), and management functions they hold (.32). The magnitude of this indirect influence on income is .15. Peschar & Wesselingh (1995) conclude that this means that persons with the same jobs have different incomes according to the differences in their education. They state that this is according to the human capital theory that states that more education always pays.

The most recent development in this field are summarized by McMahon (1996). In this review he states that researchers over the last years have attempted to arrive at a comprehensive estimate of the current total returns to education as objective as possible, that is, to estimate these returns without overestimation or underestimation. As a result, economist have more than ever been able to detect the true effect of education on earnings. Moreover, these results show that some of the returns to education may have been seriously underestimated in the past.

Mincer (1979, 1989) has build on ideas formulated in the human capital theory by stating that individuals, after they have entered the labor market, keep investing in educational activities. Moreover, his theory predicts that these activities increase their human capital, which in turn leads to a higher income on the labor market. This notion is supported by several studies investigating the effects of participating in corporate training. For instance, a study conducted by Groot (1994) in the Netherlands showed that participants of corporate training earn 11% more than non-participating members of the work force. Similar results were found in studies conducted by Barron, Black & Loewenstein (1989), Holzer (1988) and Mincer (1989). However, other results can be found in studies conducted by Bonn (1993) and Tuynman (1989). These studies found that participation in HRD had no impact at all.

This paper builds on the notion developed by Mincer by exploring the effect of participating in HRD activities on the income of higher educated professionals. The relationship between HRD and income is difficult to study, as there are many variables related to the distribution of income. Work experience is one important example (Cohn & Geske, 1990), in particular since it can act as a substitute for training and education. Moreover, research has shown that there are gender differences and differences between workers in different economic sectors: ceteris paribus women end up in less managerial positions and earn less too, while workers in the profit sector earn more than workers in the non-profit sector (Meesters, 1993). Given these other factors affecting income, the research question we try to answer is:

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What is controlled for other relevant variables. the relationship between participation in human resource development and income of higher educated professionals?

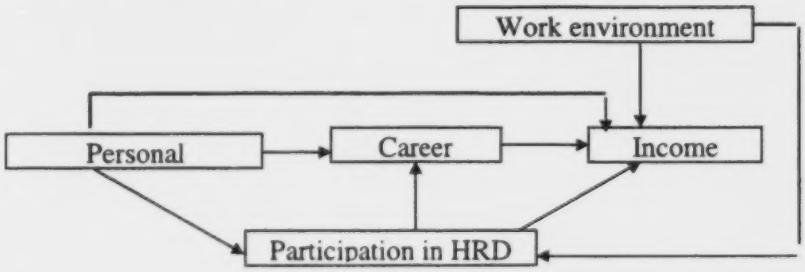
Methodology

Conceptual Framework and Operationalization

The data on which the study is based come from a study that is conducted for a national weekly magazine (with a readership of over 225,000) with a large number of advertisements for jobs for higher educated employees. This study started in 1995 with a base-line measurement. It was repeated with a slightly changed questionnaire in 1996 (Mulder & Witziers, 1998). And it will be repeated again in the years 1998 and 2000. The results presented in this paper are from the data that were collected in 1996.

The 16-page questionnaire comprises 63 questions with sub-questions in the following categories: 1. General questions; 2. Start on the labor market; 3. Career history; 4. Present situation; 5. Additional training; 6. Most important additional training program; 7. Quality of this additional training program; 8. Plans for further participation in training.

Based on the available data the following exploratory model was employed to study the research question at hand:



Firstly, this model proposes that individual characteristics (such as work experience, gender and initial educational level) affect individuals' career position, income and participation in HRD-activities. Secondly, it proposes that participation in HRD-activities affects directly individuals' career position and their income. Thirdly, it assumes that participation in HRD activities affects income indirectly by promoting their career position. Finally, the model takes into account that income and participation in HRD activities are a function of environmental factors such as the size of the organization and the economic sector of the organization. More specifically, the following variables were selected:

Personal characteristics

- gender (0 = female, 1 = male)
- number of years of work experience
- level of initial education (0 = vocational college; 1 = university);
- perceived quality of education (11 items);
- size of the job (number of hours an individual works per week);
- received a higher qualification of a regular educational institution (0 = no, 1 = yes)

Participation in HRD

- number of training programs taken per year
- amount of days participated in training programs per year

Career position

- job level (5 categories)

Work Environment

- size of the organization (number of employees);
- economic sector of the organization (0= profit; 1=non-profit).

Income

- gross earnings per annum

The meaning of most variables is clear, except (may be) the variable perceived quality of initial education. This variable measures the contribution of the initial education to finding a job. Therefore, participants in the survey were asked to denote whether or not their initial education contributed to aspects such as finding a job easily, finding a job with high salary, finding a job with good career prospects etc. The variable income (gross earnings per annum) is measured in seven blocks of 25.000 Dutch guilders (this equals with blocks of 11,261 Euro) each.

A path analysis was conducted to test the proposed model.

Sample

The questionnaire is published in the magazine on November 22, 1996. Apart from that 4,500 printed copies were sent by direct mail to a random selection from the readership. The number of respondents was 1,765. From the 4,500 questionnaires that were sent by direct mail, 859 came back; from the magazine, the remaining 906 were returned. Although the response rate is relatively small, the total number of respondents is large enough to make a valid statement about HRD for higher educated employees, and the relationship between HRD and income. Moreover, a non response analysis was carried out aimed at comparing the participation in HRD-activities of respondents with non respondents. No significant differences were found between the response group and the non-response group.

Results

Our analysis started with the model described in a previous section. However, our results show that, in order to get a better fit, some changes in the model had to be made. These changes concern opening the paths between the work environment factors and the career position variable.

Our final results (see table 1) show that the most important factors contributing to job level are gender, level of initial education, work experience and perceived quality of initial qualification. More specifically, this implies that higher positions are hold by men, university graduates, workers with more work experience and workers who's initial education gave them the opportunity to obtain a good job. Both indicators measuring the level of participation in HRD-activities have a negative relationship with job level. However, their contribution to this variable is not significant at the 0.05-level.

Table 1

Job level

Variable	Path coefficient	Standard error	T-Value
Gender	0.11	0.056	1.96
Level of initial qualification	0.31	0.043	7.20
Received higher diploma?	0.13	0.053	2.41
Work experience	0.05	0.004	12.57
Quality of initial education	0.13	0.032	4.22
Size of organization	- 0.13	0.015	- 8.67
Economic sector organization	- 0.18	0.050	- 3.56
Number of HRD-training programmes	- 0.03	0.019	- 1.56
Number of HRD-days	- 0.00	0.000	- 0.60

$R^2 = 0.18$

The results concerning the income variable show that all most all the variables included in the analysis have a significant relationship with income (see table 2). More specifically, this implies that the variables having a positive relationship with the variable job level, also affect directly the variable income. In other words, controled for job level, men have a higher income than female workers, university graduates earn more than vocational education graduates, workers in the profit sector earn more than workers in the non-profit sector. Moreover, workers in larger organizations and having more work experience earn more than workers in smaller organizations and workers having less work experience. Finally, respondents stating that their initial education gave them an easy and comfortable access to the labor market earn more than respondents stating this was less the case. Again, our results show that participation in HRD-activities does not have a significant contribution to income. As such, the main conclusion is that participation in HRD-activities has no (in)direct impact on respondents' income.

Table 2

Income

Variable	Path coefficient	Standard error	T-Value
Job level	0.45	0.023	19.85
Gender	0.32	0.054	6.00
Level of initial qualification	0.41	0.042	9.68
Received higher diploma?	- 0.11	- 0.051	- 2.19
Work experience	0.12	0.004	31.47
Quality of initial education	0.26	0.018	8.50
Size of job	0.22	0.024	9.03
Size of organization	0.12	0.014	8.35
Economic sector organization	- 0.32	0.048	- 6.68
Number of HRD-training programmes	- 0.03	0.018	- 1.43
Number of HRD-days	- 0.00	0.000	- 1.15

$R^2 = 0.62$

The results concerning participation in HRD-activities show that only a few variables have an impact the level of participation. The most important variable is work experience, indicating that in particular young people engage in HRD-activities.

Table 3

Number of HRD-Programmes

Variable	Path coefficient	Standard error	T-Value
Experience	- 0.06	0.004	- 15.48
Size of organization	0.08	0.018	4.69

$R^2 = 0.13$

Table 4

Number of HRD-Days

Variable	Path coefficient	Standard error	T-Value
Number of HRD-programmes	0.08	0.810	8.02
Received higher diploma	0.06	0.225	3.97
Work experiece	- 0.77	0.160	3.97
Economic sector	0.50	0.211	2.38

$R^2 = 0.07$

The results concerning model assessment show that our data fit the model reasonably well. Although the Chi-square test of exact fit suggests to reject the model given the small p-value, all other measures indicate that the data fit our model reasonably well.

Conclusion

The main conclusion of this paper is that most of the variables included in our model have a significant and positive relationship with job level and income. More specifically, gender, work experience, level of initial education, economic sector, size of job, perceived quality of initial education all have a significant relationship with either job level and/or income. Moreover, the direction of the relationships are in most cases in the expected direction. That is, our results are in line with either theoretical notions and/or results from previous research. However, it must be noted that variables relating to participating in HRD-activities do not have a relationship with the endogeneous variables job level and income. In other words, participants of HRD-activities do not benefit from their participation in terms of obtaining a higher position and/or getting a higher income. As such, these results are in line with other European studies (Boon, 1993; Tuynman, 1989). The results of these studies show that participating in HRD-activities does not contribute to a higher job level and /or a higher income.

Concerning the question of why participating in HRD does not pay off, in our view the most important reason has to do with the nature and context in which participation in HRD takes place. Most respondents state that they take part in HRD to develop themselves and, moreover, without informing their employee. In other words, the linkage between their HRD-activities and their job is weak. As such, the absence of a relationship between participation in HRD and benefits such as a higher job level and income is not a surprise. Moreover, respondents state that they participate in HRD to keep up with changes in their work situation. As such, this implies that their behavior is primarily oriented at continuing their present level than aimed at getting a better job. Therefore, it is no surprise that there is no relationship between participation in HRD and income.

Of course, our results can also be the result of the limitations of our study. For instance our study is limited with respect to the measurement of several variables, including the income variable and the measurement of participation in HRD. These deficiencies can mask the true effect of participating in HRD.

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Do Higher Performing Managers *Actually* Receive Better Ratings? A Validation of Multirater Assessment Methodology

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Despite significant cost and effort associated with feedback based OD/HRD interventions, relatively little attention has been paid to validation vis-à-vis hard performance measures. This study presents an applied example of a validation process based on a sample of 76 senior level managers from a global health services organization. Results confirmed the relationship between managerial performance and higher ratings on multirater feedback instrumentation, as well as its link with managerial self-awareness. Implications for practice are discussed.

Keywords: Multirater Feedback, Managerial Self-Awareness, Performance Ratings, Validation

In a society that is increasingly being driven by measurement and metrics (Church & Waclawski, 1998a; Hronec, 1993; Swanson, 1994), it should be no surprise that the process of assessing and developing managerial behavior has become one of the core practice areas of applied organizational scientists. While more traditional single-source methods of performance assessment are still common enough in organizations (Bretz, Milkovich, & Read, 1992; Murphy & Cleveland, 1995; Schuler & Huber, 1990), more and more HRD, OD and I/O practitioners are turning to development and appraisal applications based on data collected from multiple sources (e.g., Antonioni, 1996; Bracken, 1994; Church, 1995a; O'Reilly, 1994; Shipper & Neck, 1990). Though the terms vary considerably (e.g., multirater, multisource, full circle, 360-degree, and upward feedback), the interest in this process as a performance and change management tool is evident.

Based on a combination of action research and survey feedback (e.g., Lewin, 1951; Nadler, 1977), one of the fundamental assumptions of the multirater approach is that data about one's specific workplace behaviors, when compared with internal (self) perceptions, can be used as a catalyst for enhancing self-awareness and subsequent behavioral change (Church & Waclawski, 1998b; London, 1997; McLean, 1997; Tornow, 1993; Yammarino & Atwater, 1997). Fortunately for all those involved in implementing such systems, research results supporting the link between individual performance and managerial self-awareness have begun to reach critical mass (e.g., Atwater & Yammarino, 1992; Church, 1997; 1994; Church & Waclawski, 1999; Furnham & Stringfield, 1994; Van Velsor, Taylor, & Leslie, 1993). Moreover, while there are still significant questions regarding the efficacy of feedback itself as a tool (Kulger & DeNisi, 1996), some research does support its impact on behavior change when used in conjunction with OD/HRD interventions (Cheston, 1996; Hazucha, Hezlett, & Schneider, 1993; London & Wohlers, 1991).

Thus, in spite of the myriad of issues and concerns associated with implementing multirater feedback systems—e.g., regarding confidentiality, validity, rater training, cultural support, etc—current estimates of usage run anywhere from 12% to 29% (Mercer's Fax Facts..., 1996; Waldman, Atwater, & Antonioni, 1998) and appear to be growing still. Moreover, when one considers the extent to which multirater methods have already been employed in executive and management development efforts in the past (e.g., Bernardin, 1986; Burke, Richley, & DeAngelis, 1985; Church, Javitch & Burke, 1995; Hazucha et al., 1993; London & Beatty, 1993; Nowack, 1992), the total use percentage is likely to be even higher. In short, the notion of using data from a variety of perspectives for developing and improving individual effectiveness has moved beyond being just another consulting fad—it is now a legitimate OD, HRD and I/O intervention methodology.

Given the establishment and indeed institutionalization of multirater feedback methods in some organizations, however, practitioners have begun to question whether these technologies may be being adopted too quickly and recommend a host a cautions and warnings regarding implementation (e.g., Antonioni, 1997; Church & Bracken, 1997; Church & Waclawski, 1998b; McLean, 1997; Waldman et al., 1998). At this point, what is needed is a more concerted effort at developing a meaningful body of theory and research to effectively guide practice.

One critical issue in the area of multirater research and practice, that has received relatively little attention, is the nature of the multirater instrumentation used itself (Church & Waclawski 1998b, McLean, 1997). It is a common (though probably not often articulated) assumption among many feedback practitioners, for example, that

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higher ratings on a given multirater assessment instrument--almost regardless of its purported content--will directly translate to or correlate with some degree of improved individual performance. This is one of the central reasons why a large number of practitioners and consulting firms feel comfortable specializing in developing customized instrumentation for multirater interventions based on key issues in the client organization (Church & Waclawski, 1998b). The idea is, with enough focused attention and one-on-one coaching and interpretation, almost any set of practices will provide some level of meaningful information for the focal manager. Oddly enough, this is also the same rationale for justifying the use of standardized behavioral measures across different (and arguably unique) organizational settings. Unfortunately, however, these assumptions, particularly in the former situation, are rarely tested. Instead, it is common practice, especially among non-research based practitioners and firms, for feedback systems to be designed, implemented and then ultimately abandoned before the notion of data-based validation has ever been truly considered. Although there are a myriad of reasons for this situation--e.g., cost, effort and issues of confidentiality associated with linking individual feedback to existing internal performance measures, not to mention the fear of finding out that perhaps the multirater instrument constructed does not in fact correctly differentiate among levels of performance—there is arguably an ethical responsibility on the part of feedback practitioners to validate these types of applied instruments. Clearly, regardless of the amount of time, money, or effort being directed at a given OD or HRD feedback effort, if the instrument being used for assessment purposes lacks validity and reliability from a measurement perspective (Nunnally, 1978), or applicability for the organization from a practice perspective (Church & Waclawski, 1998b; Waldman et al., 1998), it will not matter what the data collection process reveals about an individual's developmental needs.

For the most part, however, the issue of instrument validation has belonged to the realm of I/O Psychology related selection and appraisal applications (e.g., Murphy & Cleveland, 1995), rather than OD and HRD based developmental programs. In fact, this may be one of the contributing factors to the "softer" connotations often associated with these latter types of interventions (Church & Burke, 1995). In any case, despite the importance of this seemingly obvious measurement issue, few organizations take the necessary steps to validate the use of an instrument for their own employees, regardless whether it is a standard or customized measure. In other words, although many internal and external OD, HRD and I/O practitioners work with feedback processes on the belief that a measurement instrument derived from set of core values, practices, or competencies (i.e., whatever the source) will indeed differentiate among more and less effective performers, relatively few validations of this assumption are ever tested empirically.

The purpose of the following study, then, is to contribute to the feedback literature by describing the results of an applied case example of how this multirater assessment tool validation process can be done using existing data from various feedback and personnel related resources. A secondary interest is to attempt to replicate prior findings (e.g., Church, 1997) regarding the link between managerial self-awareness and performance. More specifically, the following research questions were explored:

- Do higher performing managers receive better (i.e., more positive) ratings from their co-workers compared to lower performers?
- Are higher performing managers more self-aware (i.e., exhibit greater self-other ratings congruence) of their own behaviors?

In short, this paper will detail both a process and a set of results for exploring the validation of a multirater instrument. The findings will be relevant to both practitioners *and* researchers working with feedback related systems.

Method

Sample

Data for the present study were collected from 76 senior level managers (and 308 direct reports, 291 peers and 71 supervisors of the same individuals) from a global health services organization. These individuals represented a subset (for which additional differentiating performance evaluations were made available) of a larger group (n=389) of attendees of one of 12 senior management training and development programs conducted by an external consulting firm during a two year period. Participation in the program was based primarily on position in the organization and scheduling availability. In terms of overall attendee demographics, 78% of the participants were male and 22% female. Regarding tenure, 8% indicated having recently joined the organization, 20% had been there

2-5 years, 22% had 6-10 years tenure, and the remaining 50% had been with the organization for more than 11 years. In terms of age, approximately 20% were under 39 years old, while the majority (45%) were in their forties. Although geographic location was distributed among areas including Africa, Asia, Australia and New Zealand, Canada, Central/South America, Europe, Japan, and the UK, the majority of respondents (59%) were based in the U.S. with the next largest group (18%) being stationed in Western Europe.

Procedure

As pre-work for the program, all participants were required to complete a self-report behavior instrument and return it directly to an independent external firm for report purposes. In addition, parallel forms of the behavioral questionnaires were distributed to the direct reports, peers and supervisors of these same individuals for completion and subsequent return. Before completing the questionnaires, all raters, including the participants themselves, were familiarized with the developmental intent of the rating process and the manner in which the feedback would be used. Raters were instructed to be as candid and honest in their assessments as possible. All the data obtained remained anonymous throughout the feedback process.

Additional data were provided by the HRD/OD function of the organization for a subset of these attendees in order conduct a validation analysis—i.e., to link responses obtained from the multirater assessment process to actual performance evaluations. Selection into the subgroup for this study was based on the extent to which individuals were considered to be either *consistently above* or *consistently below* average in their overall performance over a two year period using archival formal appraisal ratings from personnel records as the criterion. All performance evaluations had been collected from supervisors substantially prior to selection to or attendance in the development program. Thus, this performance measure was entirely independent of the multirater feedback process at the direct report and peer level.

Although a larger number of individuals (n=100) were initially identified based on prior performance, some managers had not yet attended one of the senior management development seminars at the time of the study and others had been to a program offered earlier with different data collection procedures and thus were excluded. The final group for analysis consisted of 76 executives in total—i.e., 41 higher performers (rated by 170 direct reports, 162 peers and 39 supervisors), and 35 lower performers (rated by 138 direct reports, 129 peers and 32 supervisors).

Measures

The behavioral assessment tool used was a custom designed instrument that had been developed for this organization based a new set of core competencies and strategic leadership objectives. The instrument contained 61 items pertaining to various aspects of managerial behavior. For each item respondents were asked to rate the focal individual using a scale from 1 to 7 (where 1 = seldom, 3 = sometimes, 5 = often, and 7 = almost always) on the degree to which that senior manager engaged in a given behavior (e.g., " gives others clear feedback regarding their performance, " cooperates with others"). Content areas included developing and rewarding employees, promoting individual and organizational learning, resolving conflict, clearly communicating to others, building relationships within and across functions, focusing on strategic and business issues, and making decisions. Overall, the internal reliability of the instrument was quite high across each rating perspective ranging from .95 for self to.98 for supervisors.

A second "outcome" measure of work group climate (Burke, 1986) was also distributed to focal managers and their direct reports. Used in prior feedback programs and research (e.g., Church, 1995b; Church & Waclawski, 1997; Litwin & Stringer, 1968; Litwin, Humphrey & Wilson, 1978), this 28 item measure assessed perceptions of the climate experienced in the work group on a day-to-day basis along six dimensions: clarity, recognition, participation, standards, intraunit relations and interunit relations. In order to be consistent with the metrics of the behavioral measure, a 7 point scale was also employed. In general, the internal reliabilities for the summary scores for the instrument were also quite high among the present sample (.94 and .97).

Analyses

The data were analyzed at both the summary score and item levels using a variety of techniques including MANOVA, and simple oneway ANOVAs and t-tests. Averaged other ratings by source were used where multiple ratings existed (e.g., direct report and peer). Managerial self-awareness vis-à-vis self-direct report congruence was computed using two different methods: (a) the collective level of agreement between self and direct report ratings using a standard index of profile similarity *d*, i.e., the square root of the sum of squared item differences between

self and averaged direct reports ratings (e.g., Church, 1997, 1994; Nunnally, 1978); and (b) the four category agreement method (e.g., Yammarino & Atwater, 1997) whereby participants are classified as being either under-raters, *lower behaving* accurate-raters, *higher behaving* accurate raters, or over-raters based on a comparison of self and direct report total scores. Standard correlations were also performed for comparison purposes with prior research.

Results & Discussion

In general, the data were examined for a variety of performance and source (i.e., self, direct report, peer, supervisor) related effects across several different levels of analysis. Results are described below according to two major categories.

Multirater Feedback and Performance

First, a simple analysis of the overall summary scores by ratings source revealed the typical results—i.e., weak or nonexistent correlations—among self and others' ratings (see Table 1 for details). Consistent with prior ratings studies (e.g., Church, 1997; Harris & Schaubroeck, 1988; Nowack, 1992; Van Velsor et al., 1993), these senior managers tended to over-rate themselves compared with their direct reports ($t = 2.12$, $p < .05$). It was interesting to note, however, that peer ratings did not significantly differ in level from self-assessments, and supervisors provided the highest set of ratings overall across all 61 behaviors compared with direct reports ($t = 4.67$, $p < .001$) and peers ($t = 2.74$, $p < .01$).

Table 1.Descriptive Statistics for Summary Ratings

			Behaviors				*Climate*	
	M	*SD*	*Self*	*Drs.*	*Prs.*	*Supv.*	*Self*	*Drs.*
Behavior								
Self	5.51	.62	.95					
Direct Reports	5.27	.62	.05	.98				
Peers	5.48	.47	.21	.37*	.97			
Supervisors	5.70	.75	.04	.40*	.41*	.98		
Climate								
Self	5.40	.73	.75*	.24	.24	.25*	.94	
Direct Reports	5.03	.66	.09	.79	.36*	.43*	.37*	.97

Note: * $p < .05$, reliabilities are printed on the diagonal

These latter findings are more consistent with prior research on influence or laterally-based positions (e.g., Church & Waclawski, 1999) suggesting that the management of peer and supervisor relationships were particularly important for these executives. Although self perceptions of climate were also significantly higher than direct report ratings on this measure ($t = 3.80$, $p < .001$), the level of these ratings for both groups overall were significantly lower than they were for the behavioral assessments (self, $t = 2.37$, $p < .05$, and direct report $t = 4.60$, $p < .001$).

Next, the primary objective of this research was addressed—i.e., the relationship between managerial performance and multisource ratings—using an MANOVA model to look for overall effects across summary scores by performance group. Since the overall omnibus F was significant $F(4,56) = 5.96$, $p < .001$, additional univariate models were examined. As anticipated, the outcome of the univariate models (see Table 2) confirmed that higher performing managers were indeed rated significantly more positively by their co-workers (direct reports and peers) across the behavioral measure compared with their lower performing counterparts. In addition, direct reports of higher performing managers indicated experiencing significantly more positive climates in their work groups compared with those of lower performers.

Table 2. Univariate ANOVA Results for Ratings Source by Performance

		Lower Performers		*Higher Performers*	
	F	*M*	*SD*	*M*	*SD*
Behavior					
Self	0.01	5.51	.67	5.50	.57
Direct Reports	3.81*	5.11	.60	5.39	.61
Peers	3.90*	5.36	.53	5.58	.38
Supervisors	30.01**	5.25	.79	6.07	.47
Climate					
Self	2.41	5.26	.76	5.53	.68
Direct Reports	6.92**	4.81	.67	5.22	.61

Note: * $p < .05$, ** $p < .01$.

When examined at the item level for direct report ratings, 11 behaviors were found to significantly differentiate between higher and lower performers. In general, these centered on four major content areas: building relationships, decision making, problem solving/conflict resolution, and providing feedback & motivating employees. A similar set of content areas emerged when the peer data was examined at the item level as well. More specifically, 18 different peer assessments (in the areas of learning & skill development: problem solving/conflict resolution, integration with the larger organization, customer focus, and communication) served to discriminate among executives in the two performance groups. With respect to climate, 13 of the 28 descriptors yielded significant differences among work groups as well suggesting greater levels of clarity in roles and goals, standards of performance for the group, positive and friendly relations among members, and relationships and coordination with other workgroups in the organization. Although only a subset of behaviors and climate areas were identified, primarily having to do with relationships within and between functions, it is important to note that the trend in means was extremely consistent across almost all items and probably would have reached significance had the sample size been larger. In any case, these findings appear to confirm the notion that higher performing executives do indeed exhibit effective managerial behaviors more frequently and foster stronger or more positive work group climates.

Supervisor ratings also conformed to this relationship, yielding a particularly strong degree of differentiation among performance. In fact, when examined at the item level it was apparent that almost all (i.e., 58 out of 61) of the behaviors assessed served to significantly differentiate between higher and lower performers. While this should not be surprising given the non-independence of the initial performance appraisal measure (i.e., supervisors were the only group that would have been previously aware of the performance of the focal executives), nonetheless, this high degree of consistency does further support the validity of the multirater assessment process. Further, given the already present degree of inflation among supervisors ratings, the confirmation of the central relationship here should be encouraging for practitioners. In other words, even with major rating biases and level effects a multirater feedback tool can be strong enough to correctly differentiate among higher and lower behaving managers and, thus by implication, their performance as well.

Aside from the confirmation of this central relationship, one interesting and somewhat surprising finding here was the total absence of significant differences among self-ratings by performance for either behavior or climate. Although one might expect better performers to rate themselves higher on each measure as well (e.g., whether due to knowledge of past performance, greater levels of self-awareness, or simply inflated egos), this was not the case. Instead, both groups of executives were equally likely to over-rate themselves compared with observations from direct reports and peers. Perhaps this reflects a modesty bias on the part of higher performers, a trend which has been suggested in the past (Church, 1997; Yammarino & Awtaer, 1997). Alternatively, given their senior positions in the organization, this trend may reflect a relatively consistent positive ego perception on the part of this sample. One way to explore this trend further, of course, is through an analysis of ratings congruence.

Managerial Self-Awareness and Performance

Next, the data were examined for differences with respect to managerial self-awareness. Although prior research (e.g., Church, 1997; Church & Waclawski, 1999) has shown an empirical relationship between self-awareness and performance, the differences observed here between self and direct report behavior ratings, though sizeable, did not reach statistical significance. The same test performed on climate ratings, however, did support the

notion that higher performing managers were more aware of the strengths and weaknesses in their work unit's climate than lower performers (see Table 3).

Table 3. ANOVA Results for Profile Similarity by Performance

		Lower Performers		*Higher Performers*	
	F	*M*	*SD*	*M*	*SD*
Behavior: Self-Direct Reports	1.82	1.36	.42	1.23	.36
Climate: Self-Direct Reports	5.80*	1.38	.52	1.13	.28

Note: * $p < .05$. Lower profile similarity values indicate greater item-by-item congruence.

When these same data were examined using the four group categorical approach (e.g., Yammarino & Atwater, 1997), which is intended to avoid the problems associated with difference scores, however, the outcome did support the link between performance and managerial self-awareness at the behavioral level (Chi-square of 7.60, $p < .05$). Although the number of individuals in each cell were low, nonetheless, a significantly greater proportion of the higher performers comprised the accurate higher behaving group (64%) than the accurate lower behaving one (25%). In addition and as suggested earlier, while there were no differences by performance in the over-rating group, modesty may also been a factor in that a much larger proportion of higher performers compared to lower performers (71% vs. 28%) comprised the under-rating group. Interestingly enough, although the trend in percentages was very similar, the differences in group composition for the climate ratings did reach significance using this method of self-other comparison.

Although one could argue based on these different outcomes that methodology plays a role here, given prior research, it is more likely that the power to detect significant effects in the present sample of executives was simply too limited. Future studies over time and with larger samples should be able to help us determine the definitive answer to this question. For now, however, these results do continue, at least in part, to support the relationship between self-other ratings congruence (i.e., managerial self-awareness) and hard measures of managerial performance.

Limitations & Suggestions for Future Research

In general, there are several limitations that limit the generalizability of these results. Most significant is the nature of the sample itself. Inclusion in the present study was limited to a small set of very senior level executives from a single health services organization, all of whom had also attended a feedback-based developmental program. Although this is clearly not an ideal sample in terms of size or diversity, it is a common enough example of the realities of working with and linking existing datasets and measures midstream in an organizational setting. Unfortunately, using what is available in an organizational system often results in unavoidable issues with respect to sample size (and therefore reduced power to detect effects) as well as a variety of potential selection issues. The fact that any effects were present at all given the size of the present sample should provide some indication of the importance of this relationship. In any case, future research should focus on replicating the effects demonstrated here across a variety of samples from different levels, functions within and across various organizations and industries. Another limitation in this research is the lack of other types of hard performance measures. While supervisor appraisal records over a two year period due represent an independent and arguably "hard" measure of managerial performance (after all, this is the information by which organizations make personnel decisions), the addition of other types of indicators such as sales figures, departmental turnover ratios, size of budgets, span of control, etc. could have helped to substantiate the effects reported even further. Whenever possible, researchers need to work hard to gather and incorporate this information into their analyses.

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Examination of The Tendency of Coefficient Alpha to Support The Choice of Instruments With Response Category Restriction.

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This paper examines the effect of item construction on coefficient alpha and the effect of coefficient alpha on the comparison of instruments measuring similar constructs. It is predicted that decreasing the number of response categories of instrument items increases alpha for an instrument, but the response category restriction also decreases construct validity. Interpretation of alpha and the decision to use an instrument can be improved by considering item construction before deciding to use an instrument.

Keywords: Coefficient Alpha, Evaluation, Construct Validity

Previous research has found that job-related outcomes such as training effectiveness, post–training behavior, job satisfaction, and turnover, are significantly influenced by personal characteristics, such as motivation, affect (i.e., mood), and self-efficacy (Endler, 1976; Goldstein, 1993; Judge, 1992; Kane, 1986; Kanfer & Ackerman, 1989; Noe, 1986; Pervin, 1978; Terborg, 1981; Wexley, 1984). These personal characteristics influence performance even when ability and environmental factors remain constant, and therefore should be measured as part of any study of training outcomes (i.e., reaction, knowledge, behavior, and results; Kirkpatrick, 1959).

Measurement of Personal Characteristics

Instrument design

Personal characteristics such as affect and motivation are generally measured through self-report questionnaires using Likert scales (DeVellis, 1991). These questionnaires are based on theory, and are used when it is difficult to measure the construct in another way (DeVellis, 1991; Nunnally, 1978). These questionnaires generally contain 5 to 30 questions, where respondents are required to indicate their degree of agreement or disagreement with a statement. The degree of agreement or disagreement is generally restricted to a three-point scale (e.g., no agreement, neutral, agreement), a five-point scale, or a seven-point scale. Question responses are usually summed, so that the possible range of scores of an instrument is directly related to the range of possible responses to individual questions.

Numbers of Response Categories

Instruments with a higher number of response categories per question are able to measure a greater level of detail of the range of differences between respondents. For example, for a questionnaire with 10 questions, if there are three response categories per question, the range of scores for the questionnaire is 0 to 30, but if there are five response categories per question, the range of scores for the questionnaire is 0 to 50. The questionnaire using five response categories therefore reports the range of responses between participants in much greater detail than the questionnaire with only three response categories. This greater detail of measurement of personal characteristics can lead to higher construct validity (i.e., more accurate portrayal and measurement of the construct) which can lead to greater criterion-related validity (i.e., prediction of job-related outcomes).

Examining Reliability and Validity

Effect of Reliability and Validity on Generalizability

Using reliable and valid instruments to measure personal characteristics leads to greater generalizability of conclusions about job-related outcomes (Carmine & Zeller, 1979; Cook & Campbell, 1979; DeVellis, 1991; Nunnally, 1978). If a researcher uses a poorly constructed instrument, the researcher may be led to the erroneous conclusion that a particular personal characteristic had no effect on job-related outcomes, although the lack of

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correlation was actually due to the instrument's poor construction. It is therefore crucial to ensure that instruments used to measure personal characteristics are of the highest reliability and validity possible.

Measuring Reliability

Researchers commonly use coefficient alpha to examine the reliability of instruments before deciding whether to include instrument scores as variables in studies of job-related outcomes, such as training evaluation analyses (Cronbach, 1970; Peterson, 1994). Some researchers rely exclusively on coefficient alpha as the indicator of the reliability and usefulness of an instrument. This heavy reliance on alpha can lead a researcher to design an instrument that can measure only small amounts of variability, because coefficient alpha is based upon the inter-item correlations of an instrument. For example, a researcher may choose to use an instrument with items that are answered on a three point scale rather than a five point scale because the three point scale allows for less possible variability of scores and thus produces higher inter-item correlations and higher alpha.

Drawbacks of Exclusive Reliance on Alpha

Previous researchers have discussed the drawbacks of relying on coefficient alpha as an indicator of the reliability and usefulness of an instrument without also examining other characteristics of the instrument such as actual correlations and instrument length (e.g., Cortina, 1993; Barchard & Hakistian, 1997; Schmitt, 1996; Thompson, 1990; Zimmerman, et al., 1993). For example, Cortina (1993) and Schmitt (1996) recommended examining the effect of the number of questions of an instrument, and also examining the dimensionality of the instrument before deciding whether to trust coefficient alpha as an accurate gauge of an instrument's reliability. Barchard and Hakistian (1997) recommended examining confidence intervals when using coefficient alpha. Thompson (1990) recommended examining the statistical relationship of individual items to the instrument as a whole when interpreting alpha. Finally, Zimmerman, et al. (1993) recommended examining the correlations of subtest scores when interpreting alpha.

Hypotheses

The current paper extends this research by suggesting that item construction also should be examined before determining whether to trust coefficient alpha and whether to include an instrument in research on job-related outcomes such as training evaluation. *It is predicted that decreasing the number of response categories of instrument items will increase the instrument's mean inter-item correlation, thereby increasing alpha for the instrument.*

The response category restriction decreases construct validity which decreases criterion-related validity. Exclusive use of alpha for analysis of reliability of an instrument can then lead a researcher to the erroneous decision to use an instrument with weak construct validity and criterion-related validity, which can then lead to the erroneous conclusion that a construct has no significant effect on job-related outcomes.

Method

Subjects

A repeated measure design was used. Two sessions were conducted where subjects completed questionnaires during weeks 1 and 5. Of the 93 subjects enrolled in the study, ten subjects did not complete the two sessions, and so were dropped from further analysis.

Measures

The current research uses Affective Trait as the construct to be examined. Affective trait is the tendency to experience a general emotional state (i.e., mood), and can be either positive or negative (George, 1991). Although negative affect does not influence either recall or learning, positive affect does influence recall of material (Isen, Daubman, & Nowicki, 1987). When in a state of positive affect, individuals recall more material and more diverse material, which leads to more creative and efficient problem solving (Isen, et al., 1985). Because affect has been

shown to influence learning, it is a useful variable to be included in training evaluation, and the results of this study can be used to design instruments for future training evaluation research.

Affective trait was measured with the Positive and Negative Affect Schedule (PANAS), which measures positive affect and negative affect as two independent dimensions (Watson, Clark, & Tellegen, 1988). The measure contained 20 items, where positive affect (PA) and negative affect (NA) were measured with 10 items each. Responses were on a 5-point scale, where 1 was low and 5 was high. Responses were summed, so that the range of possible scores for the positive affect and negative affect sections was 10 to 50 each.

Affective trait also was measured with the Neutral Objects Satisfaction Questionnaire, (NOSQ; Judge, 1992). This instrument measures affective disposition as an affective bias toward items that are common in everyday life. The instrument contains 25 items, and has three response categories, where 1 is dissatisfied, 2 is neutral, and 3 is satisfied. This instrument will be used as a comparison for the examination of the effects of response category restriction of the PANAS.

Analyses

The following analyses were conducted to examine the effects of response category restriction on the PANAS.

1. Correlations and factor analyses of the PANAS and NOSQ were conducted to determine the extent to which they measure the same underlying construct.
2. Participant responses to PANAS items were recoded from a scale of 1 to 5 to a scale of 1 to 3. This recoding simulated PANAS scores if the items had been constructed with 3 response categories. The specific method of the recoding was done as follows: Actual responses of 1 or 2 were recoded 1; actual responses of 3 were recoded 2; and actual responses 4 or 5 were recoded 3. Thus, actual responses in the low range (1 or 2) were still coded low (1), actual responses that were neutral (3) were still coded neutral (2), and actual responses that were high (4 or 5) were still coded high (3).
3. Coefficient alpha was computed and compared for the PANAS actual and recoded scores.
4. Correlations and factor analyses were then repeated using the PANAS recoded scores and NOSQ actual scores.

Results

PANAS and NOSQ Variable Correlations

Correlation matrices were produced for the NOSQ and PANAS variables. These contained correlations for session 1 and session 2 for: the actual and recoded PA variables; the actual and recoded NA variables; and the actual NOSQ variables. The mean inter-item correlations and alpha statistics derived from these tables are summarized in Table 1. Alpha was computed as follows: (alpha = (k*r)/(1+(k-1)*r), where k = the number of items and r = the mean inter-item correlation). Table 1 show that there were small differences between the mean inter-item correlations for the actual and recoded PA and NA variables. For PA, the mean inter-item correlation increased from .26 to .27 with recoding in session 1, but decreased from .52 to .49 with recoding in session 2. For NA, the mean inter-item correlation decreased from .30 to .26 with recoding in session 1, and decreased from .36 to .30 with recoding in session 2.

Table 1

Mean Correlations and Alpha Statistics for PANAS and NOSQ

	Correlation Session 1	Correlation Session 2	Alpha Session 1	Alpha Session 2
PA	0.26	0.52	0.78	0.91
PA recode	0.27	0.49	0.79	0.91
NA	0.30	0.36	0.81	0.85
NA recode	0.26	0.30	0.78	0.81
NOSQ	0.11	0.15	0.76	0.81

PANAS and NOSQ Coefficient Alpha

Alpha statistics for the above discussed correlations also are presented in Table 1. For PA, alpha increased from .78 to .79 with recoding in session 1, but remained at .91 with recoding in session 2. For NA, the alpha decreased from .81 to .78 with recoding in session 1, and decreased from .85 to .81 with recoding in session 2. Alpha for the NOSQ was .76 at session 1 and .81 at session 2.

Factor Analysis of NOSQ and PANAS Variables.

Results of factor analysis using varimax rotation for the actual and recoded PA and NA variables are presented in Table 2. This table shows that the PANAS measured two constructs (PA and NA), and that there were few significant differences in the magnitude of the factor loadings between the actual and recoded PA and NA variables. In addition, the variance explained by each factor remained largely consistent between the actual and recoded variables.

Factor analysis of the NOSQ was unsuccessful due to nonconvergence. Therefore, the high alphas for the NOSQ for sessions 1 and 2 (.76 and .81) are used as indicators of the instruments unidimensionality. Factor analysis of the NOSQ and PANAS variables together also was unsuccessful due to nonconvergence.

Analysis of NOSQ and PANAS Constructs

The NOSQ, PA, and NA variables were summed to produced the respective constructs. Table 3 contains correlations for the NOSQ and PANAS constructs. This table shows that the correlations for the actual and recoded PA and NA variables were nearly 1.0. The correlation between the actual and recoded PA was .97 for session 1 and .98 for session 2. The correlation between the actual and recoded NA was .96 for session 1 and .93 for session 2. There were differences in the correlations between the NOSQ and the PA and NA constructs for the actual and recoded PA and NA variables. For session 1, the correlation between NOSQ and PA increased from .31 to .35 with recoding and from .19 to .24 with recoding for session 2. For session 1, the correlation between NOSQ and NA decreased from -.23 to -.19 with recoding and from -.22 to -.19 with recoding for session 2.

Factor analysis of the NOSQ and PANAS constructs was again unsuccessful due to nonconvergence.

Table 2

Factor Analyses of Actual and Recoded PANAS Variables

	Actual PANAS		Recoded PANAS	
	Factor 1	Factor 2	Factor 1	Factor 2
PA1	-0.01	**0.73**	0.03	**0.76**
PA2	0.05	**0.70**	-0.02	**0.65**
PA3	0.03	**0.60**	0.01	**0.60**
PA4	0.20	**0.46**	0.11	**0.53**
PA5	0.00	**0.57**	-0.07	**0.46**
PA6	-0.27	**0.48**	-0.31	**0.43**
PA7	-0.21	**0.49**	-0.23	**0.56**
PA8	-0.34	**0.27**	-0.31	**0.35**
PA9	-0.32	**0.18**	-0.35	**0.26**
PA10	-0.31	**0.46**	-0.33	**0.41**
NA1	**0.67**	0.10	**0.65**	0.03
NA2	**0.70**	-0.04	**0.73**	-0.11
NA3	**0.57**	0.10	**0.55**	0.13
NA4	**0.53**	0.07	**0.49**	-0.06
NA5	**0.55**	0.03	**0.49**	0.02
NA6	**0.65**	0.13	**0.60**	0.02
NA7	**0.40**	-0.18	**0.33**	-0.17
NA8	**0.44**	-0.17	**0.36**	-0.24
NA9	**0.60**	-0.22	**0.59**	-0.18
NA10	**0.32**	-0.22	**0.26**	-0.20
Var. exp. by factor	3.57	2.90	3.28	2.91
Final communality. est. Total		6.48		6.19

Table 3

Correlations of NOSQ and PANAS Constructs

		1	2	3	4	5	6	7	8	9	10
1	Sess. 1 PA	1.00									
2	Sess. 1 PA recode	0.97	1.00								
3	Sess. 2 PA	0.61	0.62	1.00							
4	Sess. 2 PA recode	0.63	0.65	0.98	1.00						
5	Sess. 1 NA	-0.20	-0.24	-0.15	-0.17	1.00					
6	Sess. 1 NA recode	-0.27	-0.32	-0.20	-0.22	0.96	1.00				
7	Sess. 2 NA	-0.16	-0.18	0.08	0.04	0.55	0.47	1.00			
8	Sess. 2 NA recode	-0.18	-0.20	-0.02	-0.07	0.55	0.50	0.93	1.00		
9	Sess. 1 NOSQ	0.31	0.35	0.17	0.20	-0.23	-0.19	-0.26	-0.23	1.00	
10	Sess. 2 NOSQ	0.29	0.32	0.19	0.24	-0.14	-0.14	-0.22	-0.19	0.81	1.00

Discussion

The hypothesis that decreasing the number of response categories of instrument items would increase alpha for the instrument was not supported with this sample. Although there were small differences between correlations for the actual and recoded variables and constructs, these differences were inconsistent for PA and NA. This result could be due to the fact that few respondents used the extreme ends of the PANAS scale (i.e., 1 or 5), such that the recoding had only a small effect on the PA and NA variables.

Nevertheless, the assumption that decreasing the number of response categories of instrument items would alter the correlation between the instrument and another instrument was supported. Specifically, the correlation between PA and NOSQ increased with recoding of PA for session 1 and session 2. Further, the correlation between NA and NOSQ decreased with recoding of NA for session 1 and session 2. These results indicate that research could inadvertently overestimate or underestimate the construct validity or criterion-related validity of an instrument if the instrument has response category restriction.

Conclusions

Although the hypothesis regarding alpha was not supported, the results indicated that response category restriction does affect construct validity and criterion-related validity when an instrument is validated against another instrument. It is therefore recommended that instruments used to measure personal characteristics should contain 10 to 20 items, and that items should be constructed with scales containing five to seven response categories. Instruments with low numbers of items should contain more response categories, and vice versa. An instrument constructed in this way can measure a sufficient level of differences between respondents, but is not so long or tedious as to fatigue the respondents. In order to determine whether to use an instrument after data is collected, researchers should examine: (1) the coefficient alpha; (2) the dimensionality of the instrument through factor analysis; (3) inter-item correlations; and (4) the relationship of the instrument to a similar construct. The results of these four statistical analyses should be interpreted in light of the number of items and number of response categories of the instrument.

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A Factor Analytic Investigation of the Content of Participant Reactions: Affective and Utility Judgments

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The premise of this research is that increased understanding of the content of participant reactions is a necessary step toward improving the construct validity of those judgments. This study examines the factor structure of a large data base of participant reactions, and explores the construct validity of "utility" judgments as defined by Alliger et.al. Results suggest that reactions are multidimensional, and that "utility" judgments represent an underlying factor.

Keywords: Training Evaluation, Participant Reactions

Participant reactions are by most accounts the principal means by which organizations evaluate training programs (Bassi, Benson & Cheney, 1996; Saari, Johnson, Mclaughlin & Zimmerle, 1988). According to Training Magazine (1996) approximately 86 percent of organizations use participant reactions to evaluate their training efforts. Furthermore, for most of those organizations, participant reactions are the sole means of evaluation. Consequently, improving the technology of participant reaction will yield great benefits. The purpose of this research is to identify strategies for improving participant reactions as a training evaluation methodology.

Kirkpatrick (1959; 1996) describes four levels of training evaluation. This framework has served as the organizing scheme for both practitioners and researchers. Level I represents the reactions of participants to training, typically collected through questionnaires administered at the conclusion of the training program. The second level of evaluation consists of measures of actual learning in the training program. This typically involves post training measures of knowledge, skill or attitude change. In essence, it represents an examination of the "internal validity" of the training effort. Level III evaluation is focused on gauging the extent to which learning is "transferred" to the job, and typically consists of traditional measures of job performance including ratings provided by superiors, peers or subordinates. Finally, Level IV evaluation assesses changes in organization outcomes (revenue, profit, turnover, etc) attributable to the training program.

Because Level II, III and IV outcome data are far more costly to plan and collect, organizations tend to hold their training program to the minimal level of outcome, that is, to determine simply whether or not participants react favorably to the program (Bassi et al., 1996).

The Uses of Participant Reactions

To understand the potential for an improved technology of participant reaction, it is helpful to discuss the various uses reactions serve. First, participant reactions can provide substantive input for the design and improvement of training efforts. Brinkerhoff (1986) describes a continuous improvement process, with participant reactions providing one source of data for continuous improvement of each component of the training effort. Presumably, credible reaction data can be a tremendous diagnostic tool for improving the design and delivery of training. Second, the process of collecting participant reactions can serve a "public relations" function, building up the customer's sense that the training function is sincerely interested in the service they deliver. A number of authors have argued for the importance of "customer orientation" and the measurement of customer satisfaction in human resources (Heneman, Huett, Lavingna and Ogsten, 1995).

A third use for participant reactions is as a surrogate for other, more costly criteria of training effectiveness-- measures of learning, measures of on the job behavior or performance, and measures of organization results. Because of the efficiency of the methodology (e.g., surveys collected at the conclusion of training) the development of reactions as predictors of actual learning, transfer to the job, and organizational results, would dramatically increase the utility of training evaluation.

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The Relationship of Trainee Reactions and Other Evaluation Criteria

A number of studies have examined the correlation among the four levels of training criteria, with generally discouraging results (Alliger, et. al, 1997; Alliger and Janek, 1989). The meta-analytic results presented in those studies show little systematic relationship between traditional participant reactions and other levels of training criteria. In fact, the low magnitude of correlation of trainee reactions and other criteria have led some (Holman, 1996) to question the appropriateness of participant reactions as a criterion of training effectiveness.

While trainee reactions in general show little systematic relation to learning, job performance and organization results, particular facets or dimensions of trainee reactions appear to hold great promise. Alliger et. al (1997) and Alliger and Janek (1989) distinguish between "affective" and "utility" judgments. Affective judgments measure the extent to which the participant "liked" or was satisfied with different components of the training. Utility judgments, on the other hand, reflect the extent to which the participant can apply the content to their job. These researchers present evidence to suggest that "utility" judgments show modest but significant relationship to immediate learning (level II) ($r = .26$) and to transfer (level III) ($r = .18$). Furthermore, studies reporting combined scale of affective and utility judgments show significant relationship to immediate learning (level II) ($r = .14$), to behavior (skill) learning, a level II distinction made by those researchers ($r = .12$), and to on the job use (level III) ($r = .21$).

Understanding the Underlying Constructs of Participant Reactions

While the Alliger et al. (1997) research is promising in that it illustrates the potential utility of specific judgments, a number of observations must be made. First, the distinctions drawn by the research to date (Alliger and Janek, 1989; Warr and Bunce, 1995; Alliger et al., 1997) have characterized clusters of items which appear on evaluation forms, but have not presented any factor analyses of any multi-item reaction forms. While these constructs may well be relevant and important characterizations of trainee reactions, there has been no empirical basis to suggest that trainee reactions are adequately summarized by either Alliger et al. framework of "affective" and "utility", or Warr and Bunce's (1995) "affective," "utility" and "difficulty" dimensions. Alliger and Janek (1997) present reliability estimates for the affective and utility judgments, and evidence that the item clusters relate to other criteria, they do not present evidence to suggest that those two dimensions adequately account for the variability of participant reactions. While this research offers great promise for increasing the effectiveness of training evaluation, it must be noted that the dimensions they identify are conceptually based. No factor analysis of comprehensive participant reactions have been reported. Clearly, continued development of the technology of training evaluation will benefit from identification of the underlying dimensionality of participant reactions.

It is the premise of this research that an understanding of the underlying constructs of participant reactions will improve their predictive utility. In effect, the current researchers assert that the low magnitude of relationships between participant reactions and other criteria (Alliger & Janak, 1989; Alliger, et al., 1997) are due to an inadequate understanding of the diverse content of participant reaction instruments. An increased understanding of the "facets" of participant reactions will allow researchers and practitioners to achieve stronger predictor - criterion relationships. This premise is based in part on the evolution of the job satisfaction literature. An extensive body of literature investigated the relationship between job satisfaction and performance, and repeatedly found low relationships ranging from .14 - .17 (Brayfield & Crockett, 1955; Iaffaldano & Muchinsky, 1985) leading many researchers to conclude little relationship existed between employee satisfaction and employee job performance. However, other researchers (Fisher, 1980) proposed that the low relationship between satisfaction and performance may be due to measuring satisfaction and performance at different levels of specificity, such as measuring general job satisfaction but then measuring performance on a very specific task.

More recently, this same argument has been made to explain the low relationships typically found between personality and job performance. Since the early 1990s (Barrick & Mount, 1991), there has been a plethora of research on the value of personality in predicting performance (Barrick, Mount, & Strauss, 1993; Hogan, Hogan, & Murtha, 992; Hough, 1992; Ones, Mount, Barrick, & Hunter, 1994; Tett, Jackson, Rothstein, & Reddon, 1994). Research has typically found the percent of variance personality predicts in job performance to be small. However, recently Borman, Hansen and Hedge (1997) suggested that these low relationships might be due to using supervisory ratings as the performance criterion. They argued that supervisory ratings typically reflect both task and contextual aspects of performance, but that if a more specific measure of contextual performance was used, the personality-performance relationship may be larger than previous research has suggested (Borman, Hanson, & Hedge, 1997). One study provides support for this notion in finding that supervisor ratings typically do represent both task and contextual aspects of performance (MacKenzie, Shankster, & Kohler, 1991).

Thus, this same argument could be made to explain the low relationships between trainee reactions and other measures of training evaluation when over-general composite constructs have been used (Alliger & Janak, 1989) and the increased magnitude of relationships when more focused constructs such as "utility" have been used (Alliger et al., 1997). However, the current researchers assert that participant judgments will exhibit greater complexity than the constructs (utility, reaction and difficulty) discussed to date.

The Content of Participant Reactions

A fundamental principle of measurement is that the construction of a measure requires a clear understanding of the construct to be measured. Understanding the construct is a necessary step toward improving any measure. This is true of the measurement of participant reactions as well. It is our suggestion that research on participant reactions will benefit from an exploration of the entire content domain of participant reactions. To date, there has been little research that explored the full domain of participant reactions.

A number of opinions may be relevant as a means to capture participant reaction to training programs. Furthermore, the various facets of participant reactions may well predict different criteria. Phillips (1997) identifies 15 content areas (Progress with objectives, Program content, Instructional materials, Pre-work materials, Assignments, Method of delivery, Instructor/Facilitator, Motivation to learn, Program relevance, Registration/logistics, Facilities, Overall evaluation, Planned improvements, Recommendations for target audiences, and Instructor). Each of these content areas can be further broken down into a variety of relevant issues. For example, Phillips breaks the "Instructor" category into seven issues (preparation for sessions, knowledge of subject matter, presentation skills, communication skills, responding to learners, use of appropriate technology, and encouraging application) (Phillips, p. 115-116).

Clearly, the content domains of participant reactions are numerous and each domain likely consists of various issues and perceptions. Furthermore, each of these content domains may well serve different purposes in a systematic training evaluation effort. For example, certain dimensions may well be most useful in predicting customer satisfaction; others in predicting learning; others (utility judgments) in predicting use on the job, and still others in predicting organizational results attributable to training.

Judgments

In addition to measuring diverse content areas, a variety of judgments can be asked from participants. While no taxonomy of judgments is available in the literature, one can imagine measures of amount (too much - too little), measures of adequacy or effectiveness (judged against the individuals standards or against some defined or objective standards) and measures of satisfaction (judged against the participants needs or expectations). The diversity of judgments adds to the complexity of characterizing the dimensionality of participant reactions.

The Current Research

The current research examines the dimensionality of comprehensive participant reactions. This research is based on the premise that a refined understanding of the dimensions or facets of participant reactions will increase the predictive validity and utility of those judgments.

The Dimensionality of Participant Reactions

Three research questions emerge from the literature on participant reactions. First, what is the underlying factor structure of comprehensive participant reactions? It is reasonable to predict that the typical participant reaction form, organized into content areas (Phillips, 1998) will consist of content based dimensions. That is, items dealing with the instructor will co-vary; items dealing with the material will co-vary, and so forth. Furthermore, it is reasonable to suggest that these individual facets of participant reaction will have relevance to specific criteria. That is, judgments about course content will predict specific criteria, reaction data about instructor delivery will predict other criteria, etc. The central point is that only by mapping individual predictor--criterion relationships will the psychometric properties of participation reactions be improved. The second question to address is whether a more parsimonious set of factors can explain variability in participant reactions. Alliger et al. (1997) suggest that much of the diverse content of reaction forms collapses into a single "affective" dimension. Their model summarizes all of the variability in participant reactions into two dimension, "affective" and "utility" judgments. A

third question to address is whether or not empirical evidence emerges for the conceptual distinctions drawn by Alliger et al. In particular, this research will examine whether "utility" judgments emerge as an underlying factor in participant reactions. Finally, in addition to exploring the emergence of a "utility" factor, this research will investigate the amount of variance accounted for by these dimensions, and by doing so, explore their relative impact on overall trainee reactions.

Method

Procedures

Participant reaction forms were collected from 9,128 employees of a 750,000 employee organization. The form was used to collect level 1 evaluations for a variety of non-managerial training programs conducted over a three year period. Participants were asked to report some basic demographic data as well as their reactions to the training program. Participant responses were anonymous, as there was no identifying information (i.e. name, social security number) reported on the form. Data collected from participant reactions was included in a large data base which was later used to conduct the analysis reported in this paper.

Participants

About half (48.8%) were male, 36.1% were female and 15.3% did not report their sex. More than half of the respondents were White (54%), 19.7% were Black, 3.1% were Asian, 4.2% were Hispanic, 1.1% were Native American, 17.1% of the respondents did not report their race. Most of the employees were 40-49 years old (38.9%) or 30-39 years old (27.4%), while 12% were 50-59 years old, 1.2% were 60 or older, 2.5% were 17-29 and 18% did not report their age.

Items and scales

The reaction form consists of 32 items, organized into 8 categories. All 32 items ask the respondent to rate the satisfaction with aspects of training.

Results

Principle Axis Factoring with Oblimin rotation was performed on the 32 items which made up the participant reaction form (see Table 2), with the squared multiple correlation used to estimate communalities. The Kaiser criterion was applied to the initial solution, suggesting that six factors with Eigenvalues greater than one should be extracted. In addition, examination of the scree plot suggested the presence of six underlying factors among the items. Examination of the initial extraction shows that the first six factors accounted for a total of 62.8% of the variance. Eigenvalues and percent of variance accounted for by each of the factors are presented in Table 1.

After the initial extraction, the pattern matrix was rotated to examine for more interpretable loadings. We chose to rotate and examine the pattern matrix instead of the structure matrix because in using the oblique rotation method we were interested in the unique variance accounted for by each factor. Since the pattern matrix yields partial weights, the values in this matrix are more appropriate to interpret. In order to guide examination of weights in the pattern matrix, a .45 cutoff for the loading, which represented 20% of the variance, was required to retain the item with the factor. Finally, all the items which loaded on a given factor were examined in an attempt to discern what latent construct was underlying each factor. Table 2 presents the 32 items categorized into the 6 rotated factors, and the means and standard deviations for items. Table 3 presents the factor loadings

Table 1
Eigenvalues and percent variance accounted for by each factor

Factor	Eigenvalue	Percent of Variance
1	11.07	34.6
2	3.51	11.0
3	1.73	5.4
4	1.39	4.3
5	1.29	4.0
6	1.12	3.5

Factor 1 appears to represent a "satisfaction with instructor" dimension. Items 12, 13, 14, 15, 16, and 17 loaded on this factor. Factor 2 appears to represent "overall satisfaction with the training process". Items 26, 27, 28, 29, 30, 31, and 32 load on this factor. Factor 3 appears to represent a satisfaction with the testing process, with items 23, 24 and 25 load on this factor. Factor 4 represents a "utility of training" factor. Items 2, 3, 6, 8, 20, 21 and 22 load on this factor. In some ways, this factor may mirror what Alliger, et al (1997) referred to as utility reactions. Factor 5 represents a "materials" factor. Items 4, 5, 18, and 19 load on this factor. Factor 6 appears to represent a "course structure" factor, with items 9, 10, and 11 loading on this factor.

To examine the intercorrelation of the constructs, factor derived scale scores were created. The intercorrelation of the six constructs are presented in Table 4.

Table 2
Table of participant reaction item, associated factors, and item descriptive statistics

	Item	Factor	M	SD
1	How satisfied are you with communication of course objectives in clear, understandable terms?	-	4.5	.64
2	How satisfied are you with match of course objectives with your idea of what would be taught?	4	4.31	.75
3	How satisfied are you with the relevance of the course content to your job?	4	4.43	.71
4	How satisfied are you with the quality of course materials?	5	4.41	.74
5	How satisfied are you with the audio and visual aids used by the instructor?	5	4.33	.75
6	How satisfied are you with course's emphasis on most important info.?	4	4.39	.72
7	How satisfied are you with the order the course material was presented?	-	4.39	.68
8	How satisfied are you with realism of course presentation and class exercises?	4	4.30	.78
9	How satisfied are you with the length of training course?	6	2.42	.86
10	How satisfied are you with the pace of the course material presented?	6	2.75	.56
11	How satisfied are you with the amount of student participation in the course?	-	2.82	.55
12	How satisfied are you with the instructor's knowledge of course material and subject matter?	1	4.70	.54
13	How satisfied are you with the instructor's ability to keep interest of class?	1	4.53	.72
14	How satisfied are you with the instructor's presentation and explanation of course materials?	1	4.55	.67
15	How satisfied are you with the instructor's responsiveness to student questions and problems?	1	4.65	.60
16	How satisfied are you with instructor ability to relate to students individually?	1	4.62	.62
17	How satisfied are you with the instructor's overall effectiveness?	1	4.60	.66
18	How satisfied are you with the supplies and equipment for this course?	5	4.34	.77
19	How satisfied are you with classrooms, furniture, learning environment, etc.?	5	4.28	.86
20	How satisfied are you with the extent to which the course prepared you to perform current job tasks more effectively?	4	4.19	.78

Table 2 (continued)

21	How satisfied are you with the extent to which the course prepared you to perform new job tasks not currently performed?	4	4.14	.81
22	How satisfied are you with the quality of this training course overall?	4	4.42	.73
23	How satisfied are you with the fairness of the course exam?	3	4.16	.77
24	How satisfied are you with exam coverage and importance of material tested?	3	4.16	.77
25	How satisfied are you with feedback you received as result of course testing?	3	4.15	.80
26	How satisfied are you with the availability of training courses for individuals in your job classification?	2	3.58	1.11
27	How satisfied are you with the communication of training information to employees in your facility?	2	3.46	1.14
28	How satisfied are you with the quality of training services provided locally?	2	3.67	1.05
29	How satisfied are you with quality of training services provided regionally?	2	3.63	1.01
30	How satisfied are you with registration process and information you received prior to arrival at training?	2	3.71	1.09
31	How satisfied are you with quality of training courses provided by management?	2	3.86	.90
32	How satisfied are you with relevance of training you received for specific job functions?	2	3.84	1.09

Table 3
Table of participant reaction items and factor loadings

Item #	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Item 1				--		
Item 2				-.5566		
Item 3				-.5834		
Item 4					.5448	
Item 5					.4495	
Item 6				-.4666		
Item 7				--		
Item 8				-.4013		
Item 9						.4592
Item 10						.7153
Item 11						--
Item 12	.7304					
Item 13	.7322					
Item 14	.7276					
Item 15	.8105					
Item 16	.8071					
Item 17	.8274					
Item 18					.7976	
Item 19					.5147	
Item 20				-.8017		
Item 21				-.7148		
Item 22				-.5492		
Item 23			-.9393			
Item 24			-.9584			
Item 25			-.8292			
Item 26		.7261				

Item 27	.7940
Item 28	.7633
Item 29	.8102
Item 30	.4930
Item 31	.6641
Item 32	.6054

Table 4
Correlations between factor-based scale scores derived from factor analysis

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
[1]Factor 1	1.000					
[2]Factor 2	.2179	1.000				
[3]Factor 3	.4260	.3168	1.000			
[4]Factor 4	.7141	.3618	.5233	1.000		
[5]Factor 5	.5753	.2666	.4125	.6460	1.000	
[6]Factor 6	.2513	.1499	.1333	.2692	.2008	1.000
Mean	4.61	3.67	4.15	4.31	4.37	2.58
Stand Dev	.55	.82	.74	.61	.66	.59

[1]instructor satisfaction factor
[2]overall training satisfaction
[3]satisfaction with testing
[4]utility of training
[5]materials satisfaction
[6]course structure satisfaction

An interesting pattern of interrelationship exists among the factors, with the utility factor strongly related to "satisfaction with instructor" (r = .71), satisfaction with course testing (r = 52), and satisfaction with course materials (r = .65). The intercorrelation of the factor derived scales is presented in Table 4.

Conclusion and Discussion

The first, and most compelling finding from this research is the emergence of the "utility" factor described by Alliger et al. (1997). All four of the items presumed to measure the "usefulness" of training load on the same dimension, even though the items appear on different parts of the reaction questionnaire. Because Alliger et al. (1997) have demonstrated that utility judgments hold potential as predictors of learning and subsequent on the job use of the training content, this "empirical" support for the construct validity of the "utility" dimension is noteworthy.

A second finding of interest is that the instructor dimension (Factor 1) appears to carry great weight in trainees' overall perceptions of the training effort. The instructor factor accounts for approximately 34 per cent of the variability in those judgments. Furthermore, the fact that satisfaction with instructor is highly correlated with the utility scale (r = .71) offers added support for the importance of instructors in the training process. Clearly, instructors have great impact on the experience and perceptions of training participants.

A third finding of interest is that six factors emerge from the factor analysis. While the instructor factor accounts for a sizable proportion of variance, five additional factors contribute meaningful increments of variance. Also, the pattern of interrelationship among the factor derived scales supports the contention that participant reactions are multidimensional. While some correlations are high, others are low. This evidence of convergent - discriminant validity contradicts those who reduce participant reactions to unidimensional "smile sheets". It also suggests that two dimensional characterizations (e.g., affective, utility) fail to adequately capture the information available in well-developed participant reaction forms. Clearly, the constructs underlying participant reactions are more complex than those researchers contend.

Finally, examination of the scale intercorrelations yields another interesting note regarding perceptions of utility. In addition to the instructor scale, the materials and testing scales are all highly correlated with perceptions of the usefulness of training. Future research should examine the underlying components of training that contribute to participants' perceptions that it will be useful. This research suggests that the instructor, the materials and the testing practices may play an important role.

Summary

The stated objective of this research is to make progress toward an improved technology of participant reactions. Implicit in that objective is the authors' belief that there is merit in these judgments. At a minimum, the results presented here suggest that the constructs underlying participant reactions are more complex than previously suggested. It is reasonable to argue that the past failure to acknowledge the multiple dimensions of employee reactions may well account for the dismal pattern of correlation between participant reactions and other "levels" of training criteria. While the low correlation with other evaluation criteria have led some (Holman, 1996) to question the credibility of participant reactions as training criteria, the authors of this study are more optimistic about the role that participant reactions can play in systematic training evaluation. Clearly, additional work is needed to improve the understanding and measurement of participant reactions.

Future research will seek to replicate the factor structure and interrelationship of participant reactions in other data sets, and seek to further understand the constructs underlying participant reactions and their relationship to other indices of training effectiveness.

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Effects of Two Different Learning Paths on School-To-Work Transition

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This study examines the relationship between curriculum characteristics and school-to-work transition of two learning paths in nursing and healthcare, namely: apprenticeship system and full-time senior and higher vocational education. A partly structured questionnaire has been used for interviews with employers, educational coordinators, experts, and graduates. Data have been analyzed by way of coding schemes, ATLASti and SPSS. Data analyses show that the path of learning makes a difference in school-to-work transition. Curriculum characteristics, as well as individual characteristics, organizational factors, and labor market factors have been important too in school-to-work transition.

Keywords: School-To-Work Transition, Curriculum, The Netherlands

The linkages between educational programs on the one hand and developments in the workplace on the other hand are less optimal than needed (Finch, et al., 1997). School-to-work transition is hard to accomplish, transfer tends to be highly specific and it needs to be guided, it rarely occurs spontaneously (Brown, 1995). In the Netherlands there are two different learning paths in vocational education and training, namely: apprenticeship system and full-time vocational education. Since the eighties there is a revaluation of the apprenticeship system. It is still not clear if the apprenticeship system will be the most suitable path of learning with regard to school-to-work transition (Streumer & Van der Klink, 1997). There is also talk of a shift towards the need of more transparent educational programs (Streumer, 1997) and educational programs which combine domain-specific qualifications with generic, broadly applicable qualifications (Nijhof & Streumer, 1994; Nieuwenhuis & Onstenk, 1994).

Public healthcare is growing very fast partly by demographic changes, causing a strong need for well-educated staff. A national qualification structure for nursing and healthcare educational programs has been introduced in august 1997, in which accent was on more broadness of educational programs to meet the above mentioned industry needs. Now students of the apprenticeship system and full-time vocational education have been educated along different learning paths towards the same attainment targets of the new introduced national qualification structure. In this study the expectation is that is does matter along which learning path a graduate makes his/her entrance at the labor market in nursing and healthcare.

There are many studies regarding the returns and effects of vocational education (Nijhof, 1998) and school-to-work research studies (Finch, 1996). The influence of different learning paths and the influence of curriculum variables on school-to-work transition has hardly been discussed yet. Research concerning the relation between curriculum characteristics and school-to-work transition has focused on the practical work components of educational programs (Nieuwenhuis & Onstenk, 1994; Bolhuis-Poortvliet & Snoek, 1996). In this studies the conditions for practical work situations seem to be important. There is also research into the effects of modular educational systems (Raffe, 1994; Meesterberends-Harms, 1994). It seems that the effects of modular educational systems can work the other-way-around with respect to school-to-work transition. Finally research after transfer of training and transitional skills have also been conducted (Moerkamp, 1996). In this study the question was posed if any transition at all occurred. Surveyed research Nijhof (1998) yielded a research model for connecting curriculum characteristics and labor market perspectives which is partly similar to the model of Baldwin & Ford (1988).

This input-process-output model contains important elements but it has no empirical validation yet with regard to school-to-work transition in the sector of nursing and healthcare. It also contains too many variables for the purpose of this study.

In this study the apprenticeship system will be compared with full-time senior and higher vocational education in nursing and healthcare. It would not be realistic not to take other variables in account as well. So it is stressed that individual characteristics of graduates, organizational factors (HRD) and factors stemming from the labor market can be significant too in answering the following research questions.

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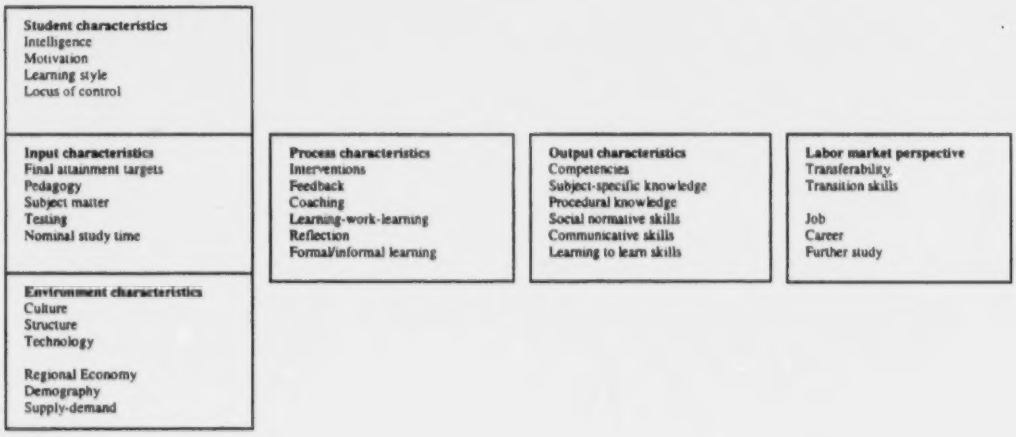

Figure 1. Research model for connecting curriculum characteristics and labor market perspectives, Nijhof (1998).

Research questions

1. Do graduates of the apprenticeship system have the same school-to-work transition* as graduates of full-time senior and higher vocational education in nursing and healthcare?
2. Which curriculum** variables do make a difference in the school-to-work transition of graduates from the apprenticeship system and full-time senior and higher vocational education in nursing and healthcare?
3. Which individual characteristics of graduates, organizational factors (HRD), and factors stemming from the labor market do make a difference in the school-to-work transition of graduates from the apprenticeship system and full-time senior and higher vocational education in nursing and healthcare?

* school-to-work transition: obtaining a job actually trained for, which belongs to a set of related jobs, which may be expected to require more or less different skills

** curriculum: implemented learning path

Methods

An embedded multiple-case design has been selected as the most suitable research method for this study. Such a design takes full account of the many variables/aspects that can be distinguished. As it is not possible to control events in the field of research and the application of methods can not be seen apart from the context. An embedded multiple-case design seemed most applicable (Yin, 1993; 1994). As mentioned before little qualitative research related to curriculum characteristics and school-to-work transition has been done yet (Streumer, 1997). That's why there has been chosen for a multiple-case study to get sight on relevant variables, which will result in a theoretical framework. In order to conduct a survey in a next phase of the study.

Participants

In an explorative phase of study it is important to get sight on different points of view. For this reason four groups of respondents have been selected, namely: employers, educational coordinators, experts, and graduates. Respondents have been selected by way of a combination of a selective selection and the snowball method (Baarda, De Goede, & Teunissen, 1995). The population from which they have been selected consists of participants related to two different learning paths of the educational nursing and healthcare system in the eastern part of the Netherlands. Respondents have been equally spread over the various educational programs. It was essential that graduates took their certificate at least one year ago.

In total 46 respondents (32 women and 14 men) have participated in this study. The *employers* consists of 8 respondents (=resp.). The *educational coordinators* consists of 11 resp. subdivided in: full-time senior vocational

nursing education (2 resp.); part-time and full-time senior vocational healthcare education (3 resp.); full-time higher vocational nursing education (2 resp.); nursing education of the apprenticeship system (2 resp.); and healthcare education of the apprenticeship system (2 resp.). The *experts* consists of 4 resp. Finally the *graduates* consists of 23 resp. subdivided in: full-time senior vocational nursing education (5 resp.); full-time vocational healthcare education (3 resp.); full-time higher vocational nursing education (5 resp.); nursing education of the apprenticeship system (6 resp.); and healthcare education of the apprenticeship system (4 resp.).

Instrument

A half-structured interview questionnaire has been developed on bases of theory, empirical research and a pilot study. The questionnaire (33 questions) contained five groups of variables, namely:

- Curriculum characteristics (16 questions), an example: "Does a modular educational system contribute to the connection to the demand of the labor market? Why yes/why not..."
- Individual characteristics of graduates (6 questions), an example: "Do graduates have sufficient capacities for functioning in their job? Why yes/why not...
- Organizational factors (2 questions), an example: "What are for employers important selection criteria in hiring their staff? Why...
- Labor market factors (7 questions), an example: "Are graduates flexible put to work in public healthcare organizations? Why yes/why not...
- School-to-work characteristics (2 questions), an example: "Do employees in public healthcare organizations move flexible at the labor market? Why yes/why not...

The four groups of participants have got the same half-structured interview questionnaire. For practical reasons graduates have got sometimes slightly different formulations.

Procedure

The interview round started. The length of an interview varied from 30 to 60 minutes, by the exception of the interviews of the graduates, which were interviewed telephonically during 15 to 30 minutes for practical reasons. All face-to-face interviews were taped and telephonic interviews have been worked out immediately. In case of unclearities the same explanations/examples for all respondents have been used.

Parallel to the interview round a coding scheme has been developed too. Beginning with a starting-list (Miles & Huberman, 1994) of core labels. Dimensions have been worked out from the core labels. At last loadings have been created on base of hypotheses (Baarda, De Goede, & Teunissen, 1995) and the interview protocols according to the phenomenographical point of view (Marton & Booth, 1997).

- The core label *curriculum variables* has been subdivided in the following dimensions: curriculum structure, practical work, attainment contents, attainment targets, educational method, educational approach, educational length, and examination;
- The core label *individual characteristics* has been subdivided in the following dimensions: ability, gender, motivation, and self-efficacy;
- The core label *organizational factors* has been subdivided in the following dimensions: working conditions, HRD policy, recruitment policy and selection criteria;
- The core label *labor market factors* has been subdivided in the following dimensions: labor market situation, substitution, and superseding.;
- The core label *school-to-work transition* has been subdivided in the following dimensions: future perspectives, and present school-to-work situation. For covering the whole concept of school-to-work transition a component of the dimension substitution, namely flexible available, has also been used for analyzing the data.

All protocols have been analyzed according to the developed coding scheme with the aid of ATLASti. The inter-subjectivity rate will be computed in the near future. In ATLASti theoretical frameworks have been built for variables (independent variables: curriculum, individual, organizational, and labor market variables) expected to have a positive as well as a negative relationship with school-to-work characteristics (dependent variable). In SPSS

these theoretical frameworks have been subject to statistical analyses (cross-tabs). Most questions in the questionnaire consist of a no, probably no, no opinion, probably yes, and a yes part (ordinal variables) and an explaining part (nominal dichotomy variables) that's why different statistics have been computed (Fisher Exact and ϕ for the nominal variables. Fisher Exact has been the most suitable statistic, therefore ϕ will only be used to show the direction of possible connections. Spearman Correlation has been used for the ordinal variables).

For statistical reasons the respondents have been split in two groups, namely: respondents related to the apprenticeship system (8 employers, 6 educational coordinators, 4 experts, and 13 graduates), and respondents related to full-time vocational education (8 employers, 7 educational coordinators, 4 experts, and 13 graduates). The group of respondents related to the apprenticeship system consists of 28 respondents (20 women and 8 men) and the group of respondents related to full-time vocational education consists of 32 respondents (22 women and 10 men). In total there are 46 respondents, however employers, educational coordinators (secondary vocation healthcare education) and experts can be spread over both groups for their assessment.

Results and Discussion

Referring to *research question 1:* "Do graduates of the apprenticeship system have the same school-to-work transition as graduates of full-time senior/higher vocational education?"

Results show that the learning path makes a difference in relation to school-to-work transition. Especially for graduates of full-time secondary nursing and healthcare education, 75% find themselves not capable enough for start working at the labor market. As a graduate pointed it: *"There was not enough time to learn skills in practice during the two practical works of each eight weeks. Lack of time causes a disconnection between the educational program and the work field."* In most of the times they simply are not succeeding in finding a job and have to start an apprenticeship program for being considered. Legislation of the government plays an important role in this with regard to reserved actions (Ministry of Healthcare, Welfare, And Sports, 1996). In the new qualification structure, implemented in 1997, educational programs are better prepared for contenting these requirements.

Results show too that especially graduates of full-time higher vocational education have a profound theoretical knowledge (stated by 72 % of all respondents). In contrast to graduates of the apprenticeship system who are immediately available but don't have a profound theoretical knowledge (stated by 80% of all respondents). This causes a different start at the labor market. As a graduate of full-time higher vocational nursing education mentioned: *"At the beginning more time is needed for reaching self-employment. You have to worm in an existing situation which costs time."* In contrast, a graduate of the nursing apprenticeship mentioned: *"I function perfect at my own department. Other departments function differently and there I have to start all over."* The apprenticeship system was rule in nursing and healthcare. The exception was full-time vocational education. As an expert posed: *"Now you can see different appreciation of employers for the two learning paths partly caused by legislation of the government. It is more wanted that people look more from a distance and with an analytical view to situations in public healthcare. As graduates of full-time higher vocational nursing education do."*

Employers' viewpoint about a well functioning staff seems to be important. Do they prefer working with own educated staff or do they prefer working with full-time more broad educated staff. Estimation of costs has to be taking in account as well.

Referring to *research question 2:* Which curriculum variables do make a difference in the school-to-work transition of graduates from the apprenticeship system and full-time senior and higher vocational education in nursing and healthcare?"

Results show that there are curriculum variables, which seem to make a difference in relation to school-to-work transition. However, for now it will be hard to set up precisely all curriculum variables which really make a difference. Firstly this has something to do with the many variables taken into consideration in this study. Besides curriculum variables, individual characteristics, organizational factors and labor market factors have been taken in account as well. Then the level of abstraction plays a role. Asking a respondent, *"Do graduates who have had sufficient time for practice during courses function differently from graduates who have had less time for practice?,"* will not cause any problems. However when trying to ask a question as, *"Do graduates who have had course centered education function differently from graduates who have had course exceeding education?"* one will face a lot of difficulties. Respondents simply did not really know the answer and are not capable in observing differences in daily practice. Finally this study brings out its own limitations, namely relatively small groups of

respondents. Generalization will only be possible for the vocational education and training system in nursing and healthcare in the eastern part of the Netherlands.

After taken these limitations into consideration there have been results too. Both significant positive and negative relations of curriculum variables in relation to school-to-work transition will be presented in table 1 and 2.

Table 1
Curriculum Characteristics Positive Related to School-To-Work Transition

	Substitution flexible: Available 2		Substitution flexible: Available 3		School-to-work: Near future 1		School-to-work: Near future 2	
	Apprent.*	FT**	Apprent	FT	Apprent	FT	Apprent	FT
Curriculum variables (nominal)								
Curriculum structure – Connection 2								-.110*** 31.3****
Practical work – Influence 1	-.011 25.0	-.068 9.4		-.078 15.6			-.023 42.9	
Practical work – Influence 2	.012 12.0			.022 40.6		.062 18.8	-.023 42.9	
Attainment contents – Connection 4	.008 39.9				-.055 10.7			
Educational approach theory -Practice 1					.010 42.9		-.038 28.6	
Educational approach theory -Practice 3					-.004 0.0		.104 21.4	
Educational approach centered/exceeding 2							.052 42.9	.068 40.6
Examination 1							.111 50.0	
Examination 2	-.089 3.6				.089 14.3			.068 25.0

Curriculum variables (ordinal)	Substitution flexible available		School-to-work near future	
	Apprenticeship system	FT education	Apprenticeship system	FT education
Attainment contents connection	.013*****	32.1******	-.037	35.7
Practical work influence			-.098	75.0
Educational approach centered/exceeding			.018	17.9

* Apprent: Respondents related to the apprenticeship system
** FT: Respondents related to the full-time vocational education
*** -.110: Fisher Exact significance 1-sided and α is .10
**** 31.3: Percentage of respondents who scored on both variables positively
*****.013: Spearman Correlation significance 1-sided and α is .10
****** 32.1: Percentage of respondents who scored on both variables positively

Nominal as well as ordinal variables are constant in the direction of the connection. The structure of the curriculum matters, as an employer declared: *"Graduates of the full-time education are theoretical more broadly what contributes in contacts with doctors and reporting skills. In the apprenticeship system is often talk of second chance education which we don't prefer."* Practical works do have an influence too, especially in getting a job. A

graduate of the apprenticeship nursing education pointed: *"This hospital really attention one's functioning at the work place."* In contrary an expert said: *"Employers judge themselves if an applicant is likely to the job."* Half of the employers prefer own-educated staff. At the start graduates of both learning paths function differently. However an expert marked: *"Graduates of both learning paths reach in a couple of years the same self-employment."* Right after graduating there can be a discrepancy between what graduates of full-time higher vocational education are capable of and what employers expected them to do. As an educational coordinator noted: *"Work field can have a different view on what they need then educational institutions. Probably this is caused by their apprenticeship background." "Looking at the educational approach it is really a question if organizations are that interested in educational programs. Educational results count in practice,"* as an expert observed.

There is no connection between the direction of the relationship of nominal variables and ordinal variables. Possibly declared by the fact that loadings have been created on phenomenographical point of view. Remarkable is that 20% of the employers do not prefer graduates of the apprenticeship system for reason of second chance education. Another important factor is the relation between educational institutions and work field. A graduate said it as follows:" *There is conflicts between the apprenticeship system and higher vocational education. The work field stands in the middle or is taken a side."*

With regard to practical work there is a difference between the coaching for full-time vocational education students and students of the apprenticeship system. An expert mentioned: *"Organizations paying the education for the apprenticeship system it is in their benefit to coach their students."*

Table 2
Curriculum Characteristics Negative Related to School-To-Work Transition

	Substitution flexible: Available 1		School-to-work: Labor market 4	
	Apprenticeship	Full-time	Apprenticeship	Full-time
Curriculum variables (nominal)				
Curriculum structure: Connection 3			.038 10.7	.034 9.4
Attainment contents: Connection 1			-.077 14.3	
Attainment contents: Connection 2		-.001 3.1	.043 14.3	
Attainment contents: Connection 3	.010 25.0	.011 15.6		
Attainment contents: External influence 1	.039 13.0	.056 31.3		
Educational length 2	.048 25.9	.003 16.7		
Practical work: Coaching 3				.083 6.3
Practical work: Coaching 4			-.065 0.0	
	Substitution flexible available		School-to-work labor market	
	Apprentice	Full-time	Apprentice	Full-time
Curriculum variables (ordinal)				
Attainment contents connection				-.066 21.9
Attainment contents influence				-.057 9.4

Referring to *research question 3:*"Which individual characteristics, organizational factors (HRD), and factors stemming from the labor market do make a difference in school-to-work transition of graduates from the apprenticeship system and full-time senior and higher vocational education in nursing and healthcare?"

Results show that there are factors, which make a difference in school-to-work transition. Both significant positive and negative relations of individual characteristics, organizational factors, and labor market factors in relation to school-to-work transition will be presented in table 3 and 4.

Nominal and ordinal variables are not constant in the direction of the connection. The table shows that men are more career oriented then women and have a better position at the labor market. Very often students choose a learning path after their own attitude and all want to start working after graduating because of their motivation in helping other people. Graduates with full-time labor contracts have a more flexible attitude then their part-time colleagues. Probably due to family care. Graduates of the apprenticeship have a lead at graduates of full-time education when they start working for they have already a job at the start of their education. It depends on the recruitment policy of each organization if graduates of the apprenticeship system have the same opportunities in getting a job as graduates of full-time education.

As far as it fits the case nominal and ordinal variables are not constant in the direction of the connection. The table shows that women are less career oriented then men. Further organizations want staff continuity and graduates who match with their culture. As long as the supply is greater then the demand organizations can pick who they want. Government educational policy does not always connect with the situation in practice.

Another crucial question: *"Are graduates flexible available at the labor market?"* Looking at the future it would be preferable if graduates are flexible put to work with regard to mergers of organizations and increasing complexity of healthcare. However family care, less motivation for career opportunities, option for a specific direction, and a relatively bad situation at the labor market in the eastern part of the Netherlands keep people stuck at their place. As an educational coordinator noted: *"It would be preferable if graduates move more flexible at the labor market. However, graduates are not willing and organizations want to know who is on their pay-list."*

Recapitulating there is a difference in school-to-work transition between the two different learning paths. There are curriculum variables which make a difference in the transition. Until now we know that the curriculum structure, the educational approach, practical work, educational length, and attainment contents do make a difference. Individual characteristics (ability, gender, motivation, and self-efficacy), organizational factors (work conditions, HRD, selection criteria, and recruitment policy), and labor market factors (future, substitution, and superseding) do make a difference, too.

The following theoretical framework can be constructed after the results of this study and will be tested in the coming survey.

Table 3
Individual Characteristics, Organizational Factors, and Labor Market Factors Positive Related to School-To-Work Transition

	Substitution flexible: Available 2		Substitution flexible: Available 3		School-to-work: Near future 1		School-to-work: Near future 2	
	Apprentice	FT	Apprentice	FT	Apprentice	FT	Apprentice	FT
Individual characteristics (nominal)								
Ability 1				-.006		.030		.086
				28.1		40.6		46.9
Gender 4						.058		
						9.4		
Motivation choosing learning path 5				-.014				
				3.1				
Motivation searching work 1							-.082	
							32.1	
Self-efficacy 1					-.040			
					21.4			
Organizational factors (nominal)								
Work conditions 2					.081			
					25.0			
Selection criteria 1				-.035	.076	.042		
				12.5	35.7	28.1		
Selection criteria 6	-.067							
	0.0							
Selection criteria 7				-.083	-.040			
				18.8	21.4			
Labor market factors (nominal)								
Labor market: Future 2						-.031		
						21.9		
Substitution flexible: Available 2						.062		
						21.9		
Substitution flexible: Available 3						-.029		
						9.4		
Substitution job-after-function 2					-.027			
					10.7			

	Substitution flexible available		School-to-work near future	
	Apprentice	Full-time	Apprentice	Full-time
Individual characteristics (ordinal)				
		-.013	-.098	
Ability		18.8	46.4	
Motivation choosing learning path		.002		
		40.6		
Labor market factors (ordinal)				
Substitution flexible available				-.042
				18.8

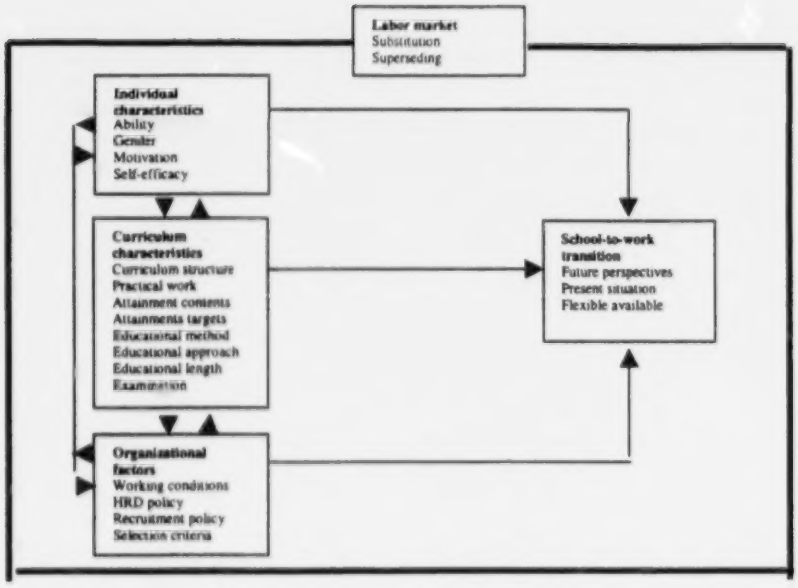

Figure 2. Curriculum characteristics and school-to-work transition.

Table 4
Individual Characteristics, Organizational Factors, and Labor Market Factors Negative Related to School-To-Work Transition

	Substitution Flexible: Available 1		School-to-work: Near future 3		School-to-work: Labor market 1		School-to-work: Labor market 3		School-to-work: Labor market 4	
	Appren	FT	Appren	FT	Appren	FT	Appren	FT	Appren	FT
Individual characteristics (nominal)										
Gender 3						.068 15.6				
Organizational factors (nominal)										
HRD 4				-.101 0.0		.085 9.4				
Recruitment policy 4	.015 50.0	.056 31.3								
Selection criteria 8								.087 17.9		
Labor market factors (nominal)										
Labor market fit 2									-.013 3.6	-.030 0.0
Labor market future 1		.033 9.4								
Labor market future 3									.082 10.7	
Substitution job-after-function 3	.019 35.7									
Substitution volunteers 2		.033 9.4								
Superseding 1										.030 18.8
Superseding 3	.044 17.9									

	Substitution flexible available		School-to-work labor market	
Individual Characteristics (ordinal)	Apprenticeship	FT	Apprenticeship	FT
Ability		-.013 0.0		-.081 9.4
Self-efficacy	.022 7.1			
Labor market factors (ordinal)				
Labor market future		.091 9.4		

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Predictors of Success in Welfare-to-Work Training for the Information Technology Workforce

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A major challenge in welfare-to-work training programs is preparing welfare recipients for entry-level jobs with long term career paths at wage levels that allow real self-sufficiency. The current shortage of workers in information technology (IT) fields not only calls for innovative solutions but presents an opportunity for entry into the workforce. A demonstration program described here reports the extent to which various assessments prior to training could predict success in securing employment in IT positions.

Keyword: Information Technology, Welfare Reform, Workforce Training

On August 22, 1996 President Clinton signed into law the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (The Welfare Reform Act) which radically reformed the nation's welfare system. This law requires that the majority of individuals and their families receiving public assistance move from welfare into full time employment. It has been two years since this legislation was passed into law, and we are seeing positive results (ASTD, 1998). The Department of Labor reports that the number of people on welfare has dropped from 12.2 million to 8.9 million, a 3.3 million decrease. This dramatic change is the result of progressive initiatives that have begun across the country to maximize the opportunity to train this workforce to prepare them for employment opportunities in the public and private sector. With the reality of a tight labor market, and the need to create a diverse and skilled workforce, welfare reform creates an opportunity for businesses to assess their recruiting and training efforts, and to look at a viable, non-traditional labor pool to fill their labor needs.

As Human Resource professionals look to the future of their organizations, they see a demand for a workforce that is diverse, one that is reflective of the communities in which their businesses operate. As businesses experience a shortage of workers, the welfare reform act acts as a catalyst for organizations to consider the recruitment and training of the pool of diverse workers within the welfare system. While many existing training programs address the skills necessary to place these individuals into entry-level jobs, the most successful programs also address strategies for the individuals to grow their jobs into meaningful and lucrative careers (Friedlander & Burtless, 1995). According to the Welfare to Work Partnership (1997), businesses that hire former welfare recipients have experienced higher retention, lower turnover, and have reaped the benefits of hiring workers that are trainable and ready to work. Tax incentive programs are in place to assist businesses that are interested in filling their position vacancies with individuals from the current welfare pool.

The Workforce Investment Act of 1998 addresses the country's need for a more deliberate commitment on the part of the government to support the training demands of our society (Micco, 1998). This Act compliments the Welfare Reform Act because it shifts funds into the hands of local government to support the training efforts of local workforce investment. In the case of welfare reform, it provides an additional financial incentive to businesses to tap the pool of welfare recipients for training in preparation for their move from welfare to work.

The Workforce Development Challenge

Due to the dynamics of technological advances, businesses are challenged by the speed at which change takes place in the workplace. Organizations can benefit from developing and participating in training programs that prepare welfare recipients to operate more skillfully, and therefore more effectively, to enhance productivity in response to the reality of a highly competitive global economy (Riccio & Orenstein, 1996).

The IT Workforce Shortage The nations pervasive problem with unfilled jobs in information technology (IT) areas challenges educators and businesses alike to develop innovative solutions. According to a national survey

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sponsored by the Information Technology Association of America (ITAA, 1998), almost 350,00 IT job openings were identified in companies with over 100 employees. These openings were present in every geographical region of the country and existed across many specific job areas.

A regional survey in the northern Virginia area making up part of the metropolitan Washington D.C. area placed the number of unfilled high technology jobs at 20,000 and growing. Of these 20,000 job openings, half were identified as "low-end" technology jobs, not requiring a college degree or extensive experience. Many different types of programs have been started in the last two years to prepare individuals with the potential to succeed in entry level positions which would provide an introduction to a viable career in the IT field.

A Brief Overview of TekAid TekAid is a unique partnership that was designed to bring education, industry and human services together to identify, train and place selected individuals on public assistance. The program delivery part of the partnership consisted of teams from Virginia Tech, Northern Virginia Community College, and from Mitretek Systems, Inc., a company largely devoted to solving technology transfer problems. Program funding was provided by the Fairfax County (Virginia) Department of Family Services and the Northern Virginia Regional Partnership, a state entity charged with addressing the IT employment demand in northern Virginia.

The program developed was an intense training program to prepare entry level technologists for employment in the IT field. Industry partners were involved in identifying the key components of the screening and the training that would identify and prepare specific candidates as most likely to succeed in this endeavor. A fourteen week training program was developed to train participants in computer programming (mostly COBOL) in order to qualify them for entry level programming positions in companies conducting Year 2000 date remediation work. The program consisted of a total of 16 credits of coursework, tutorial assistance, supplemental training, employability training, and job placement assistance. It is this program that is the focus of this study.

Problem Statement

Two important issues regarding today's workforce have been highlighted, the IT workforce job shortage and the initiatives for job training mandated by recent welfare-to work legislation. Industry is faced with having to tap heretofore unused resources, new pools of workers for IT jobs that may not have the necessary skill sets. Questions therefore arise about what form that training may take and who is most likely to succeed. Human service agencies are faced with a mandate to help clients secure permanent jobs before their benefit eligibility expires, jobs with paid benefits and salaries sufficient to sustain a family. Having the means to direct clients towards appropriate jobs and training opportunities that can result in success is a crucial part of this mandate.

Research Questions

This research addresses the following question:

What is the predictive value of the following variables on successful completion of an information technology training program directed to a group of selected welfare recipients:

1. Basic mathematics skills;
2. Computer programming aptitude;
3. Assessment of potential through personal interviews;
4. Prior experience with computer technology.

Method

All data measuring the independent variables mentioned above were collected in June of 1998. Math skills were assessed using the mathematics section of the Wonderlic Basic Skills test. Computer programming aptitude was measured using the Computer Operator Test Battery. Prior experience with computer technology was assessed using a demographic questionnaire.

These data were collected from 120 clients who were eligible for the program and who had expressed interest based on a brief presentation of the program. Based on the preliminary data, 70 clients were invited to a

personal interview. The 30-45 minute interviews consisted of the candidate and two interviewers. After the interview, the interviewers jointly completed a feedback form, reporting their impression of the potential of the candidate to participate in the program. They also completed a rating sheet consisting of items rated on a ten point scale. These items included assessment of the general aptitude for technology work and overall estimate of the likelihood of success in the program.

Based on these interviews, acceptance into the program was offered to 51 candidates. When the training started, a total of 49 candidates enrolled. After the first half of the fourteen week program, 40 students remained. The formal training ended October 30, 1998. Since the vast majority of participants were not employed at the end of the program, an intensive effort was made for the following two months to provide job placement assistance. Thus, the design allowed two different measures of success, (1) completion of coursework, measured by grades received (0-4, representing no credit, D, C, B, and A) and (2) securing of full time employment in a technology related job.

Analysis consisted of testing the predictive value of the independent variables though multiple regression. Since there is no current theoretical model of how the predictors may be related, and the primary aim of the research is to maximize predictability of success, a step-wise regression procedure was used. In addition, analysis of variance and T tests were used to examine differences between groups and Pearson correlations were calculated to examine relationships between individual variables of interest.

Results

As shown in Table 1, of the 49 participants who began the program, 35 successfully completed all training (defined as receiving the total 16 credits of coursework). Of these, nine were not employed in full time technology related jobs within two months following program graduation. In five of these cases, this was due to a combination of lack of English proficiency and lack of a permanent work visa. In four of the nine cases, a combination of limited technology skills, poor interviewing behavior, and low motivation contributed to inability to secure employment.

Table 1. Program Participant Outcomes

	Completed Program	Did Not Complete	*Total*
Full Time Technology employment	26	6	*32*
No Technology Employment	9	8	*17*
Total	*35*	*14*	*49*

Of the 14 participants who did not successfully complete the program, six received full time job offers in the last two weeks of the program and dropped out in order to accept these positions. The other eight terminated participation approximately midway in the program, for the following reasons:

- Problem pregnancy (2)
- Chronic illness (2)
- Lack of academic progress (2)
- Moved out of area (1)
- Substance abuse (1)

Those participants securing full time employment were receiving annual salary levels ranging from $19.5K to $60K, with a median of approximately $23K. However, due to prevailing hiring practices, most were in temporary probationary (for three months) positions that did not provide standard benefits.

Analysis of variance and T-tests comparing completion groups (completers vs. non-completers) failed to detect any differences due to any pre-assessment variables. Likewise, analysis of variance and T tests comparing employment groups (employed vs. not employed) failed to detect any differences. Pre-assessment variables included mathematics skills, computer aptitude, general technical aptitude, overall likelihood of success, and prior experience with computers. As depicted in Table 2, Pearson correlations of the pre-assessment variables with program outcomes (in terms of the grades received in the courses) showed moderate relationships in some cases.

Table 2. Pre-assessment and Outcome Correlations

		Pre-assessment Measures				
		Wonderlic	COAB	Technical Aptitude	Overall Assessment	Prior Experience
Program Outcomes (Grades)	Intro to Computers	.066	.135	.321*	.111	.444*
	COBOL I	.125	.277**	.332*	.239	.526*
	COBOL II	-.005	.012	.145	.037	.366*

* p<.02 ** p<.05

The Wonderlic mathematics skill assessment was not related to any of the success measures. The COAB computer aptitude measure was moderately related to success in the first COBOL course, but not strongly enough to support its use as a primary predictor. Interviewer assessment of technical aptitude was related to success in the first two courses and prior experience was related to success in all courses. No regression models could be developed that explained a significant amount of outcome variance, due to the multicollinarity of the predictors.

Discussion

These predictors do not take into account all of the personal, social, economic, and emotional factors that also may have contributed to or hindered a candidate's success. To a great extent, the inability to identify meaningful predictors of success was a function of the overall success of the program. The program delivery model combined intensive training with intensive support. For example, during the first week, mathematics remediation was provided to all participants with weak math skills. This remediation was targeted to specific individual weaknesses identified through testing and was very successful in increasing skills for the weaker students. In addition, ongoing social services support was provided through a caseworker specifically assigned by the county to work with these participants to help overcome financial, transportation, and other obstacles potentially interfering with successful completion.

Job Placement A crucial discovery some weeks before program completion was the great difficulty that would be encountered in securing employment for graduates. Industry partners that had expressed need for IT employees six months previously either did not have positions open at the time, or were seeking to fill positions for which program graduates did not qualify. Perhaps due to the employment environment of the region in which many employers are in fact contractors for federal agencies, certain placement obstacles were insurmountable. About one-forth of the participants were immigrants, on political asylee status or other visa that did not provide permanent work status, nor did it allow minimal security clearances required by many employers. Also, some contractors' clients required personnel with bachelors degrees, even though they were not necessary to perform the job functions. An anticipated attraction of a potential $8500 tax credit that employers could receive for hiring program graduates was meaningless, at best, for the medium to large companies with positions to fill. The hiring managers were aware that those funds would not come directly to a project, and at the vice president or higher level, it was deemed insignificant compared to ensuring project success or having to terminate and rehire.

Another feature of the employment environment that created placement challenges was the practice of hiring new employees on a temp-to-perm probationary status through placement agencies. This establishes a procedure whereby recruiters are tasked with matching job descriptions provided them with resumes, which was not always a perfect match with program participants. To a large extent, similar procedure existed when internal human resources department were doing the job screening. Also, the promise of the availability of a great many entry level positions proved to be severely limited, especially in the Y2K remediation arena. Many jobs for COBOL programmers existed, but they required several to many years of experience.

These employment environment characteristics required a much greater than anticipated involvement by all project staff in job placement after formal program completion. Supplementary training was provided in specific areas that seemed to be in demand, such a web page design and advanced office applications. Intensive assistance was provided to tailor resumes to specific job openings, Practice with interviewing was provided and group interviews with recruiters were arranged. Also, effort was made to dispel the notion of many program participants that job offers would be coming to them with little effort on their part.

Limitations The extra efforts made to ensure successful program completion may have blocked any potential predictive effect of the pre-assessment measures. Also, a moderate degree of the selection process was based on those measures, which may have resulted in a restriction of potential variance. Also, this population was drawn from an affluent metropolitan area with somewhat unique demographics as welfare recipients, facing a somewhat unique employment environment. Results with populations in other geographic regions may be very different. Moreover, it is not known at this point what the long term employability patterns will be for program participants. While the program was designed to provide entry into a field that has potential career paths and development opportunities, the extent this capability was achieved can only be determined by a longer-term follow-up examination.

Potential Implications

The results of this research have limited value for making selection recommendations for training for similar and related populations of candidates for job training. Based on the data from this study, it is clear that a simple formula for predicting employment or program success for this population is not possible. Objective measures have as great, and as limited a role as more subjective assessments.

However, there are particular implications for staffing and recruiting personnel in the information technology field, who are finding it increasingly challenging to fill IT jobs with the typical pool of applicants. The typical hiring procedure in which a project of program manager decides staffing requirements based solely on task requirements, and recruiters (internal or external) are tasked with matching candidates to job descriptions may need to be examined. A closer involvement by the placement personnel with the hiring managers may be more successful in matching unused resources with unmet needs.

For example, a manager may determine that a project or program requires, say, two system analysts and five experienced programmers. On examination of the tasks involved, it might be discovered that half of the tasks are of a low level routine nature, such as testing. A different staffing pattern of the two system analysts, two programmers, and three or four programming assistants may be sufficient. This would not only save money in personnel costs but would provide resources to develop into positions requiring more expertise.

To fill what has been identified as a critical need to hire employees for the current IT shortage, businesses need to look at nontraditional methods to meet those demands. Legislation has been designed to support, encourage, and challenge the business community to recruit and train welfare recipients. The challenge for human resource professionals is the need to engage in strategic recruitment and training efforts to gain access to a new source of labor. This effort requires creative and innovative measures to address this opportunity. Partnerships between the public and private sector are an essential and valuable vehicle for identifying the potential candidates to hire from the public assistance sector.

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Workforce Preparation in a Rural Context: A Curriculum Integration Intervention

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Considerable time and money have been expended at the Federal, state and local levels regarding workforce preparation in the United States. An approach that has received considerable attention in the last decade has been curriculum integration in the public schools. This paper describes a 3 year project that was funded by a state board of education. Four rural school systems participated in a project that featured the integration of science and applied agriculture.

Keywords: Rural Education, Workforce Preparation, Curriculum Integration

The transition from school to work for young adults is an important focus of federal and state funding in the United States (Stasz and Kaganoff, 1998; Orr, 1998). Part of this focus has included demonstration projects that feature curriculum integration interventions in public schools. This paper describes one such intervention that took place in a rural context. A vocational center was awarded a 3 year demonstration project funded by a state board of education in fiscal year 1995. The vocational center was owned and operated by eleven school districts. The curriculum integration project involved four member districts, and the four high schools represented approximately 800 students.

The following objectives guided the project planning, implementation and evaluation:

1. The project planned to improve math, science and agri-technical skills of 40-120 students (10th-12th grades) enrolled in agricultural career programs.
2. High schools students were expected to increase their abilities, knowledge, and interests in agricultural-business fields. This was to be accomplished by participating in an integrated program which incorporated on-site farm and agricultural projects, integrated applied academics, and university field experiences.
3. A usable structure for integrating math, science and agri-technical curricula was designed and implemented in the classroom by teachers based on knowledge, skills and strategies learned from staff development workshops.
4. Collaborative efforts between agriculture business/industry leaders, farmers, university faculty, students, parents and high school educators were used to build partnerships to promote scientific literacy in agricultural businesses.

Statement of the Problem

The current study was undertaken to empirically examine the perceptions of multiple stakeholders involved in a curricular intervention within rural schools. Understanding the ways in which students, administrators, teachers and counselors view an intervention in the rural context can address taken for granted assumptions that "one size fits all" with school to work policy issues. This study sought to bring attention to those factors unique to the rural context so that future researchers and practitioners might be better able to plan and implement school to work interventions.

Theoretical Framework: Workforce Preparation in a Rural Context

Generally speaking, little is known about workforce preparation issues in rural contexts. Workforce preparation, similar to other federally and state sponsored initiatives, have suffered from a lack of sustained inquiry about the unique problems of rural schools. Interventions envisioned at the federal level are often difficult to plan and implement in a full range of schools: rural, suburban, and urban (Roth, 1996). For several decades the research agenda for rural schools has been marginalized. National research agendas and their utility for serving rural issues and problems have been openly questioned by several educational researchers (DeYoung, 1987). These scholars

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infer that the community based needs that are intertwined in the culture of rural schools often remain unserved by the massive quantitative studies of educational researchers in the United States.

Although schools in small towns and rural environments account for over one-third of the students in the United States, the nation's educational research agenda still allots rural schools a somewhat marginal status. A relatively minor amount of research has been conducted regarding rural schools, their students and teachers, and their learning environments (Federal Interagency Committee on Education, 1991). This dearth of research is noticeable in the urban bias of federal and state educational policies and actions (Roth, 1996).

DeYoung (1987) asserted that a shared understanding was held by scholars who have toiled in the area of rural education. This common core of beliefs depicts a lack of attention at state and national policy levels regarding the unique context of rural education:

- Rural education in the United States is viewed as an anomaly unbefitting of respect from educational theoreticians and researchers.
- Administrative, curricular, and staffing solutions that are frequently posed for urban and suburban situations may not offer utility for rural settings.
- Demographic, economic, and administrative variables of the rural context deserve ample attention from educational researchers and policy makers.

In light of the preceding observations, the framework for this study pertained to factors that influenced the planning and implementing of an intervention in rural schools. Perceptions were sought from various stakeholders regarding the unique elements of the rural context that influenced the intervention.

Research Questions: The Perceptions of Stakeholders

What were the perceptions of students, teachers, principals, and counselors in rural schools regarding a workforce preparation, curriculum integration intervention? Their perceptions were sought to identify factors that were pronounced in rural schools and that effected the intervention. The following questions guided the study:

- How does the rural context effect the dynamics of teacher interactions across disparate disciplines (including team teaching)?
- How do daily schedules of rural teachers effect planning and implementing an intervention?
- How does course scheduling within rural schools effect planning and implementing an intervention?
- How do rural school and community relationships effect authentic instruction?

An Overview of Project Methods

Merriam (1991) outlined the characteristics of different types of systemic inquiry, and her discussion will be used here to explain why both qualitative and quantitative methods were used in this project. "Non-experimental (or, as it is often called, descriptive) research is undertaken when description and explanation (rather than prediction based on cause and effect) are sought, when it is not possible or feasible to manipulate the potential causes of behavior, and when variables are not easily identified or are too embedded in the phenomenon to be extracted for study." (7) In this type of research, the researcher does not attempt to manipulate variables because the context might not permit it. The researcher accepts the situation as it is -- and does not try to prove cause and effect relationships among variables. Descriptive case studies are inductive in nature, because it is impossible for the researcher to identify all of the variables prior to beginning the study (Merriam, 1991). That is to say, understanding of the context emerges as the study is underway, and important research questions begin to form as one learns more about the case.

In this study, the researcher believed it would be difficult to isolate variables from the unique attributes of the rural contexts of schools. Each setting had variables that were too embedded within the context for them to be cleanly extracted. As examples, were science students' scores higher or lower on pre-tests and post-tests because of variables introduced by different teachers? Or were test scores different because of laboratory partners, attitudes toward homework, or extra-curricular activities? Perhaps scores were different because of the time of the day or because of preconceived notions about science classes or agricultural classes? Perhaps science students had different predispositions toward standardized tests as compared to agriculture students?

This project involved the doings of four rural schools. And it brought into account not a singular interpretation of what was occurring at these schools, but instead it involved the multiple realities of various constituents who were connected to the schools in one fashion or another. Given these multiple interpretations, one cannot make sweeping generalizations concerning cause and effect outcomes that might be directly attributed to the intervention associated with this project. There were too many variables that influenced the teaching and learning transactions in this rural education context. However, knowing as much as we can about the context helps us to make sense of the situations and occurrences.

Administration of Longitudinal Study of American Youth Instruments

Content and attitude tests were used with project students. These instruments were used to provide project personnel with a general idea of student skill in and attitudes toward science. The instruments were selected from materials developed by the Longitudinal Study of American Youth (LSAY). Data were primarily used for planning purposes among project personnel. Instruments were administered to 52 participants, with a gender break-down of 39 males and 13 females. There were 9 sophomores, 19 juniors, and 24 seniors who completed the instruments.

As explained in the LSAY Code-book, the intent of the science test is to measure the development in skill in cognitive processing related to science. The LSAY used items developed by the National Assessment of Educational Progress to measure four science related skills:

1. Knowledge of science
2. Application/utilization of science knowledge
3. Integration of science knowledge
4. Implications of science for society.

As explained in the LSAY Code-book, *Knowledge of science* deals primarily with factual material and is dependent on the ability to recall specific facts, concepts, and principles. *Application/utilization of science* involves the ability to combine factual knowledge with rules and formulas to solve a specified problem or answer a specific question. *Integration of science knowledge* refers to the ability to organize information more generally for problem solving, often involving use of scientific concepts and principles, drawing proper conclusions, and employing higher-order thinking skill in reaching a solution to a problem. *Implications of science for society* deals with the understanding of societal level applications of science and familiarity with scientific technology that one might encounter in discussions of societal issues.

Four questions on the test asked the students to provide their personal opinions regarding the test. These questions and student responses are listed below. They provide insight regarding the feelings of respondents regarding the difficulty of the test and the amount of work it required.

How much of this material on this test has been taught in your classes? Over 36 percent of the students thought most of the material on this test had been covered in their classes.

How difficult was this test? Over 55 percent of the students thought that the test was difficult, and over 28 percent of the students thought that the test was easy.

How well did you think that you did? Over 55 percent of the students thought that they had done well on the test, and over 28 percent of the students thought that they had done poorly on the test.

How hard did you work? Over 46 percent of the students stated that they had worked pretty hard on the test, and over 38 percent of the students stated that they had not worked very hard on the test.

Personal Interviews as Data Collection Methods

Interviews were conducted with teachers, counselors, and principals in their home schools. In each case, the participants responded to the protocol of questions that was developed by the researcher. These field research interviews were important data collection activities. The interviews provided insights about how the intervention was perceived by the practitioners in light of the unique characteristics of their home school. As a data collection method, the field research interview is a dynamic, non-linear process that requires active listening and empathetic interpersonal skills on the part of the researcher (Mason, 1993). The interviews allowed the participants to speak freely about their perceptions of the intervention, and they cited some of their trials and tribulations as they experimented with it.

Focus groups as Data Collection Methods

A focus group was conducted with all of the teachers at a central location (the vocational school). Focus groups were also used to collect student data at their home schools. As a data collection method, the focus group allowed the researcher to pose open-ended questions to the group and establish a dialogue among the participants. Greenbaum identified four ways that focus groups are different from traditional interviews: multiple respondents participate, participants interact, a moderator is present, and an outline or protocol of questions is used (cited in Herndon, 1993). An important aspect of the focus group method as a data collection device is the interaction that must be achieved with and within the group. The interaction allows insights and data to develop about the intervention that would otherwise not emerge. The intent of the focus group is to create a synergistic effect that can produce data that would not evolve from the highly structured nature of traditional interviews. Focus groups offer a unique vantage point from which to study the collective perspectives and experiences of participants who are engaged in an intervention.

Comments on the Emergent Themes

Content analysis, a method applied in this study, can be used to make valid inferences about the text of transcription. Content analysis allows the researcher to create classifications for data and help organize the data into useful arrangements. Given the nature of this study, broad categories were generated and coding schemes were developed and applied manually on the basis of conceptual issues. The researcher worked closely with two representatives of the area vocational school during the data analysis phase. An external reviewer examined the sorting process and conferred with the researcher on discrepancies. Transcripts of individual interviews and focus groups yielded data that were rich with patterns that could be traced to the dynamics of the intervention in a rural context. A discussion of study findings is presented in the following narrative.

Meshing Disparate Fields of Study

Bringing together disparate fields of study was both challenging and rewarding to teachers and students who were involved in this project. Preservice programs for these agriculture and science teachers were considerably different. When these two types of teachers were brought together as part of a team teaching assignment, their different methods of practice became evident to both teachers and students. These differences appeared to be pronounced as a function of the rural context. For the most part, the teachers accepted this as a positive challenge -- they learned from each other, they observed each other in action, and they borrowed teaching tactics from each other. Generally speaking, the agriculture teachers refined the laboratory reporting that was required from students and they integrated scientific methods with their instruction. The agriculture teachers gained a greater appreciation of structure from the science teachers. Generally speaking, the science teachers gained an increased appreciation for authentic learning that can be gained from work-based learning and community-based projects. They also learned how to be more flexible in their teaching as a result of working with the agriculture teachers.

Adapting to Team Teaching by Participating Students

Just as team teaching was new to most of the teachers who were involved in this project, it was also a new experience for most of the students in these rural schools. Students had to adapt to the notion of having two teachers in the classroom. Many of the students were accustomed to either an agriculture teacher or a science teacher. Students had to adapt to the styles of teachers who represented both the fields of agriculture and science. Students had preconceived notions of the instruction that they were about to receive, based on whether they had been an "agriculture student" or a "science student" within the context of the rural school. These preconceived notions effected student performance in the classroom. Students commented that they entered the class thinking it was going to be a traditional science or agriculture class, only to find out that the course was structured quite differently from their expectations. Generally speaking, the "science students" had to adapt to the outdoor and hands-on activities, and the "agriculture students" had to adapt to the theory-based "book work" associated with the science content.

The Need for Shared Planning Time

Communication among teachers was critical in this project that featured curriculum integration. It was clear to the students if the teachers were not "on the same page" in the classroom. Probably the most critical element of communication for participating teachers in the rural context was having the time to get together for planning instruction. Rural teachers wear many hats -- including a variety of extra-curricular assignments. If the time is available, they can begin to understand each others' teaching idiosyncracies. Shared planning time reduces the number of misunderstandings and mis-communications that can happen in a team teaching assignment. This issue was prevalent in the discussions with teachers throughout the duration of the project.

Increasing the Access to "Different" Fields of Study

An interesting benefit of this project was the "mixing" of students across ability levels and disciplines. In rural schools, teachers in certain disciplines can be assigned the same students over and over again. A teacher in a rural school -- even with a very small enrollment -- might never have a student in his/her class because the student does not take classes in that discipline. This project increased access to disciplines that students heretofore had not experienced. This project increased the access for students to receive both agriculture and science instruction. This allowed traditional science students to receive hands-on instruction related to science concepts, and it allowed traditional agriculture students to advance their academic skills in taking notes and writing laboratory reports.

Authentic Curriculum and Instruction

The project curriculum was considered to be a strength of this project. The teachers viewed the curriculum as being ill-structured, vague, and ambiguous. It was considerably different from the traditional, well-defined science text-books and their accompanying work-books. However, the types of problem solving that students are apt to perform in the work-place will most likely not be well-defined and clearly articulated. The work-place is full of messy, ill-structured problems that will be the real test of workforce preparation. The variety of activities of the project curriculum was appreciated by the students, and the activities were often meshed with problems, needs, and environments of the rural communities. Among the four participating schools, there were opportunities for students to learn about concepts with books, technology in the laboratory, greenhouses on-site, and off-campus learning situations.

The Problems of Course Scheduling in a Rural School

Scheduling in rural schools is a major problem. The availability of classes for students had varying effects on the enrollments in the project classes at the different sites. In some instances, students enrolled in the project class because there were no other options available to them. This problem seemed to be especially prevalent in schools that were on eight block schedules. In other cases, students could not get into the project class because it was scheduled at a time that conflicted with required courses. For example, if the school only had two sections of World History, then the school schedule needed to accommodate those courses. Enrollments in the classes should not be gauged as a simple indicator of whether the class was popular or not among students. In some cases, the constraints of rural school programming limited the enrollments in this elective course. A variety of factors influenced the enrollments, such as: (1) the size of the preceding year's class, (2) popularity of the teachers, (3) length of the class period, and (4) the general perception of the class by other school personnel and students. Some teachers suggested that upper limits should be considered for class size. Equipment, lab space, and the nature of experiments made it difficult for teachers to handle large enrollments in the class.

Which Students Can Most Benefit From This Type of Instruction?

A significant issue with this program pertained to the type of student who might benefit from this type of instruction. It was noted that the results of the science tests administered in this project showed a significant decline in 1997 as compared to 1996. Although many variables may have effected this decline, interview data strongly suggested that the academic skills of 1996 students were considerably stronger than 1997 students. Counselors, teachers, principals and even students alluded to this issue. It appeared that the rigor of this curriculum was not a good match for students with weak academic skills. On the other hand, average ability students who flourished in applied instruction seemed to perform very well in this program. Teachers expressed an interest in being able to

interview students prior to their admission to the program. In addition, teachers expressed the importance of certain prerequisite courses that should be met prior to a student's admission. These issues are intertwined with the scheduling issues that were outlined in the preceding section.

Putting Knowledge to Work

An important outcome of this project was the understanding that students gained regarding the relationship between the disciplines of agriculture and science. The project students were able to experiment with practical applications (through agricultural instruction) of science concepts that provided additional meaning to them. Teachers used authentic teaching and learning activities, such as shadowing experiences, field trips, work-based learning opportunities, community development activities, and other extensions of the classroom. This practice was highlighted in fiscal year 1996 and it continued through 1997. Students liked opportunities to put their knowledge to work for a greater cause than merely getting a grade. Students at all sites expressed their excitement about the outdoor education activity in which they were able to work as teams with students from the other sites. They had a great deal of fun learning together and they developed a great respect for the power of teamwork. Although rural schools might be short on human and fiscal resources, it seems that their closer relationship with community can make authentic instruction within reach of innovative teachers.

The Fit of Team Teaching in a Rural School

Issues regarding team teaching were just as prevalent in 1997 as they were in 1996. The issues varied according to the school sites and the teachers who were involved. In some instances the teachers seemed to have a synergistic effect on each other's teaching, and in other cases the complexities of the team teaching dynamics actually hindered instruction. The following factors influenced team teaching relationships: teaching styles, levels of content expertise, years of teaching experience, emphasis on one content area over the other, discipline issues, and personality types. As one principal stated, staff development and ample practice opportunities were needed to bring out the best of the team teaching model. Within this case study, is was doubtful whether human and fiscal resources were sufficient to serve these needs. Rural teachers are used to working independently in the privacy of their own classrooms. Teaching dynamics were quite different when these rural teachers were paired together to deliver a team-taught lesson. On a positive note, several teachers stated that the relationships formed between the agriculture and science teachers would continue to have a positive effect on this program.

Concluding Comments and Implications for the Field

The purpose of this paper was to examine a workforce preparation intervention that took place in a rural school context. Workforce preparation is an important part of the overall human resource development agenda of the United States. However, workforce preparation in rural schools has not received much attention from scholars and researchers. As previously noted, federal and state research agendas have tended to slight the unique characteristics of rural schools. In many instances, educational innovations that have emerged from legislative actions have been designed and targeted toward urban and suburban schools. Minimal consideration has been given to the close alignment of community and school in rural contexts.

This study noted that a specific workforce preparation intervention was entangled in the myriad contextual issues of the participating rural schools and communities. The dynamics of the rural context effected the planning and delivery of instruction, scheduling of classes, enrollment of students, and other factors. Planning, implementing and evaluating curriculum integration interventions in rural contexts cannot be activities that isolate the intervention from the larger realm of community.

In the future, researchers would be wise to consider rural, urban or suburban as research variables that merit attention in project design. One size glove does not fit all hands. Research designs and intervention strategies need to focus on the unique aspects of the context and how they might be woven into the planning fabric.

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Human Resource Related Characteristics in Selected Small Manufacturing Companies in Mexico

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The author interviewed executives from 31 selected small manufacturing companies in Mexico for the purpose of identifying, among other things, their perceptions of human resource related characteristics in their organizations. Analysis of the transcripts and observations of the workersled to conclusions. Human resource programs focus on employee relations more than on employee development. Training activities target personal more than skill development. Workers are treated as an expense more than a resource worthy of investment. High performance work practices are rare.

Keywords: Human Resource Problems, High Performance Work Practices, Mexico

This is a descriptive study about the human resource related characteristics of Mexican small manufacturing companies. It is an exploratory survey conducted through structured face-to-face interviews which were audiotaped, transcribed, translated, and analyzed. The survey is a preliminary step for a research project which hopes to contribute to the identification of appropriate interventions for enhancing high performance work practices in small companies which conduct business internationally.

The research problem is that, while small companies comprise almost all of the Mexican economy, and most of them manufacture products, many for exportation, there is little reliable information available about their human resource characteristics.

The data previously available are incomplete. They have been collected from some companies but not from others. They are inconsistent. That is, some data sets actually contradict what others say about the same companies. They are non comparable in that they have been collected in so many ways and by such varying categories that they cannot be directly compared. Many of these data have been collected by government or quasi-governmental agencies which are perceived to seek justification for increasing taxation, and may thereby be unreliable. And finally, relatively few data have been broadly accumulated about small manufacturing companies.

Overview of the Literature

There is substantial literature related to high performance work practices in the US. The future of competitiveness for the US company is related to how well its workers are trained, hoiw flexible and adaptable they are, and whether it is a high performance workplace. (Potter & Youngman, 1995). America's management paradigm has shifted to provide employees greater opportunity to influence the outcomes of work organizations. Through changes in the design of work and a renewed emphasis on the importance of training and development, selective staffing, compensation, and information sharing, management has begun to realize the effect workers can have on the attainment of organizational goals (Levine, 1995).

High performance work practices assist people to involve themselves in the decision making and problem solving processes of their work activities. Based on an analysis of previous research, some of the most frequently implemented high performance work practices are quality circles, work teams, job rotation, total quality management, crosstraining, employee committees, training and development, selective staffing, compensation, and information sharing (Youndt, Snell, Dean & Lepak, 1996; Marlow, 1998).

By allowing workers to influence their work activities, organizations can take competitive advantage of the human element. Creating high performance work environments which fulfill human, social, and psychological needs allows organizations to reap the benefits of increased productivity, product quality innovation, and flexibility (Schutz, 1994; Mirvis, 1993; Marlow, 1998.)

Small businesses have always comprised the vast preponderance of the economy in Mexico and, for that matter, throughout the rest of the hemisphere to the south and in most of the rest of the world. According to several

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agencies which provide Mexican government mandated management development and employee training programs, small companies employed more than 95% of the workforce in 1997.

The government mandated training programs are by subscription. This means that the companies which earn the most money and employ the greatest number of employees are required to pay for and participate in the programs while the smaller ones are left out. This makes it difficult to estimate the potential for targeted training and development programs for management and for employees.

Purpose of the Study

The purpose of the study is to identify perceptions of selected small manufacturing executives about human resource related characteristics in their companies in the State of Puebla, Mexico.

Research Questions

What are the perceptions of selected Mexican small manufacturing executives about human resource related characteristics in their companies?
What are the perceptions of these executives about the future development of human resources in their companies?

Research Methodology

The methodology for the study was the conduct and qualitative analysis of interviews with top managers of small Mexican manufacturing companies which export. Transcripts of the interviews were reviewed and analyzed cognitively. Qualities of similarity, range of participant sources, and clarity of themes, thoughts and phrases were identified, sorted, and compared.

The CatPac textual analysis software package from TerraResearch was implemented for the purpose of evaluating several of the most disparate transcripts for frequency and proximity of words. Textual analysis involves three basic steps:

1) word count and creation of a table of correlations between words;
2) investigation of word clusters with high correlation to identify interest or significance; and
3) graphic presentation or mapping of word clusters of interest or significance.

While the word clusters sometimes reveal items for subgroup comparison or for traditional cognitive analysis, in this case no particular differences emerged beyond what could be extracted with cognitive analysis.

Interview Guide

A formal interview guide was developed from the feedback of ten subject matter experts in Mexico. These experts were Mexican economists, academics, consultants, writers, and business leaders who were experienced with small Mexican manufacturing companies which export products.The guide consisted of demographic, descriptive, and perceptual questions about respondent companies in the areas of demographics, human resources, organization, exportation, NAFTA, the future, and success.

Selection of Manufacturing Companies

Interviews were conducted with one executive from each of 31 approximately 50-500 employee-based manufacturing companies, or similar sized divisions of larger companies, which exported products. Purposive and snowball sampling were used to identify participating companies. A research decision was made to purposively collect data from companies identified as "apparently successful" by executives of other companies. Snowball sampling was chosen as the only way to get access to these executives, since a referral from a professional peer is often a prerequisite to entry for a data collector in Mexico.

"Apparent success" was deliberately left undefined in order to facilitate the identification of a sample selected by reputation among peers. Since there were no data available from which to identify a population of

successful companies by measurable criteria, it was determined that, while biased, selection by perceived reputation was likely to yield more subjects functioning at higher levels than selection with no criteria.

Initially, a few "apparently successful" companies were identified by officials at the Mexican university sponsoring this study whose owners or top managers were also board members, benefactors,or alumni of the university. These respondents were then asked to identify executives of other small exporting companies which they believed to be successful and who could be contacted with a referral from them. Those most frequently identified were invited to participate in the study.

Additional respondents would have been otherwise difficult to identify due to the frequent incompleteness, inconsistency, non comparability, and unreliability of statistics about companies in Mexico. They would have also been unlikely to participate due to their desire to hide or understate their "apparent success" for fear of being targeted by the government or by either industrial or common thieves.

A wide range of industries representative of the manufacturing sector in Puebla and central Mexico was incorporated into the interviews. These included rustic furniture (6); ceramics (2); clothing (7); marble and stone (2); plastic products (3); mechanical parts and appliances (2); snack foods (3); industrial chemical processes (2); and textiles (4).

Procedures

Interviews were carried out by one interviewer and one recorder who audiotaped each interview with two mini cassette recorders and took written notes of verbal and nonverbal responses by interviewees. The interviewer and recorder discussed and compared their impressions of each interview at its conclusion. Each interview was followed by a tour of the facility which included an observation of production processes and of worker performance and interactions.

Audiotapes were transcribed verbatim on disc and hard copy by a transcriptionist who was trained by the interviewer to attend to the idiosyncratic aspects of these particular interviews. Transcripts were reviewed and checked against notes, and corrected with the audiotape where indicated. The interviewer was American and the recorder and transcriptionist were both Mexican. All transactions were conducted in Spanish.

Transcripts were translated into English with the use of the software program Globalink Power Translator Pro v6.2. The translation was reviewed and corrected by the interviewer, and found to be sorely lacking. The transcripts were comprised of informal, colloquial, Mexican Spanish, much of which is expressed more as a series of idioms than of words. The translator used the Barcelona engine, which was developed for the European Economic Community, and translated decontextualized words rather than expressions. For example, it translated "materia prima", or raw materials, as "cousin means". While "prima" can mean female first cousin as well as prime or raw, the former obviously has no meaning in this context, and the more literal meanings of both words were discarded by the translator. In the end, the interviewer relied primarily upon the original Spanish transcripts and his own fluency in the language.

Results

Some of the companies had designated a specific area of human resources, but many did not. Where the specific area was designated, it was usually focused more upon the maintenance duties related to hiring, payroll, and absenteeism than it was directed to high performance work practices.

Where there was an administrator of human resources, such a person usually wore several organizational "hats", and human resources was often not considered to be the most important of these. The human resource administrator was sometimes the chief accountant, the director of operations, the bookkeeper, or even the owner of the company. In the larger of these firms it was sometimes a director of public relations or an ombudsperson responsible for negotiating with the unions and/or resolving employee disputes.

Most directors of human resources had no formal education in the field. Some had degrees in general management or engineering or accounting. Several had participated in short term training programs related to human resources. A few were former teachers or professors. One plastics manufacturing person had previously been an organization development consultant. The range of competence and insight from this person to others who were essentially administrative assistants with no higher education was dramatic.

The majority of companies carried out their responsibilities for human resources in a manner focused more upon short term survival than upon continuous improvement or development. Most companies were more concerned

about ensuring that enough enmployees appeared for work each day so that the plant could meet its production quotas than they were about increasing employee effectiveness.

There appeared to be a strong paternal relationship between managers and workers in most companies. Salaries and benefits were usually not far above the minimum legal standards in Mexico, approximately ten percent or less of that in the US. This "hand to mouth" condition left many workers dependent upon the good graces of their employer as the sole recourse for financial assistance through crises. So human resource directors were often charged with caring for valued employees who had special medical problems or legal predicaments. Employees were often encouraged to bring their personal problems which were affecting their work performance to the attention of the human resource person, who would sometimes attempt to intervene in their behalf.

Programs and activities related to human resources tended toward company sponsored parties on special occasions like national and/or religious holidays; periodic meetings with motivational speeches made by managers or invited presenters; field trips to recreational or cultural centers; and the posting or sponsorship of educational or personal development programs provided by other agencies in other locations after work hours. One exception to this pattern was the strong desire by several plants to meet the requirements of ISO-9000 in order to qualify for exportation into international markets, particularly in Europe.

Formal programs directed to the development of specific work related skills were less common. In a marble and stone company the top managers provided direct training to the workers. Many were taught to operate two machines simultaneously which had previously each been operated by one person. This job redesign training was provided for workers who volunteered and were selected. They were rewarded with an approximately 50% increase in salary. Most of these workers were also crosstrained on other machinery. The plant manager in this case was an industrial engineer who had received additional training in the US.

In response to questions about the effects of human resource programs upon the employees and the company's "bottom line", the executives talked about increased motivation to work and greater loyalty. A few said that the workers were more knowledgable about their work or about the organization. The director of a plastics factory, who said that he was studying philosophy and humanities in the evening to broaden his education beyond his management degree, provided reimbursement for the costs of formal education of any kind for his employees, without concern about whether it was work related.

Regarding future plans for human resources, most indicated that they would continue with what they were doing or that they would like to do more of the same. Very few spoke about striving for a new or different human resource function from what they currently had.

Some high performance work practices were observed, although few seemed to be implemented beyond a rudimentary level. Quality circles were not formally implemented. Work teams were present in some of the assembly plants, particularly in ceramics, clothing, and appliance manufacture. Some teams met weekly or daily to address issues of efficiency or specific assembly problems. Job rotation was present in several companies on a limited basis, as was crosstraining. There were few formal employee committees. Information sharing was conducted formally in a few organizations, but in most the financial data were held very closely within management.

Staffing was not done selectively in most cases. Many companies seemed desperate to find enough workers who could learn quickly and who would come regularly to work. A few plants had instituted a formal probationary period to precede year round employment, as they would often dismiss workers when the demand for their products was reduced by seasonal or other variations in the market.

Compensation ranged from minimum wage to from two to four times minimum wage, depending upon the perceived need for a stable workforce and the value to the company of skilled or trained employees. A form of profit sharing was present in a few plants where management indicated that it had affected production in a positive way. Medical benefits varied from none to very moderate. Most workers were relegated to services in the state run social security hospitals. Retirement benefits were required by the government but were quite modest. Other benefits not required by the government were rare.

Training and development for workers was mostly of the "on the job" variety. Workers were assigned as assistants of more knowledgable employees until they were recognized as able to function independently. Some plants encouraged workers to attend school on their own time, and a few had made specific arrangements for transportation to basic literacy programs. Managers were sometimes reimbursed for higher education expenses, and many of the top managers participated in management development seminars in Mexico and in the US.

Conclusions

There is an expression in Mexico that a successful company is one which is still in business after the peso devaluation and the continuing decline of its value as it floats against the dollar. (Its value depreciated from 3.5 to the dollar to six on December 14, 1994, and has continued to decline to its current value of approximately 10.5 to the dollar in January, 1999.) In this context, these organizations may be called successful because they are survivors rather than because of human resource programs or activities.

The role of human resources is most often seen as encompassing employee relations and personnel accounting functions rather than implementing high performance work practices. The failure to recognize the importance of employee development to global competitiveness will lead to serious problems as Mexican companies are challenged by plants in Asia and Africa where the labor force costs a smaller fraction of Mexican costs than Mexico's currently are of the US.

Many executives are familiar with current American and Western European management concepts and terminology. They profess an enlightened philosophy about planning and employee involvement, and human resource development. Many describe their ethical or religious obligations to help their workers and society as well as the company. But there is a gap between the positions taken and the extent to which they have committed resources.

Paternalism in the workplace competes with employee development and restricts its implementation. Treatment of workers as unfortunate, ignorant, or childlike does not usually lead to confidence in the value of investing in increasing their capacities to contribute to the organization.

Most of these companies are family owned and operated, in which most of the decision making is reserved for family members and their spouses. There is often an unspoken expectation of conformity with tradition and the status quo, and new ideas are sometimes looked upon with suspicion. Renewal and responsiveness to changing market conditions become more difficult to carry out, and competitive advantage is harder to acquire.

The emphasis of human resource programs upon recreational and caretaking activities more than developmental ones, and upon general more than skill based training, compromises the potential for improving worker productivity through human resource development. Examples include a company promoting the study of English as a second language by employees whose work skills have not been assessed, and another focused upon ISO-9000 certification without having done a cost benefit analysis of such an effort.Resulting disillusionment could lead to a further reduction in, or abandonment of, more focused and effective investment in their people.

Recommendations

Most of these companies, particularly the family owned ones, can benefit from opening themselves to fresh perspectives from new people. Many of them are physically hidden like military forts within their own communities. Executives guard their techniques and processes with great care from their competitiors. They could profit from recognizing the value of continuous renewal and innovation to competitiveness within Mexico and globally.

The tradition of paternalism should gradually give way to partnership with the employees. In the human resource programs, this would suggest movement from emphasis on caretaking activities like parties, motivational speeches, and arbitrary interventions for personal problems reserved for the most loyal workers, to employee involvement programs and a system of profit sharing reflected in compensation and benefits.

Training and development activities should be based upon formal planning and need assessment at the organizational, team, and individual levels.They should then be directed to the performance and productivity goals of the company, and emphasize pertinent knowledge and skill development.

High performance work activities should be considered for and adapted to the needs of each organization. Those with particular potential for improving human performance in these companies are selective staffing, information sharing, crosstraining, self managed work teams, employee committees, profit sharing compensation, and training and development.

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Creek Women's Perceptions of Work: A Qualitative Study

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This ethnographic study of Muscogee (Creek) women's perceptions of work substantiated existing research indicating differences in the value systems held by this minority and those of the mainstream population. The result detail further how these and other differences may influence HRD professionals who work with and prepare these and other minority workers.

Keywords: Workforce Diversity, Culture, and Identity

As the workforce engages more minority women, in general, and more Native American women, in particular, practical and theoretical knowledge is required about how their motivational needs, patterns, and roles are framed by gender and cultural heritage. There is also a need to understand how to recruit, hire, place, and retain minority females. The participation of women of all races is expected to increase. By 2005, women are expected to make up 48% of the labor force (USDOL, No. 95-1, 1995). American Indians, along with Hispanics, Asians, Alaskan natives, and Pacific Islanders, are expected to see the most growth. These groups are projected to increase by 80% by 2005, while the participation of African American women in the workforce, for example, is expected to grow by only 34%.

This research studied the culture of Muscogee (Creek) women in central Oklahoma. The study's purpose was to give voice to a marginalized sector of America's workforce by exploring the work perceptions of Native American women, in general, and those of Creek women, in particular. Studies suggest that Native American value systems are different from that of the larger American culture (Brady, Crome & Reese, 1984; D'Andrea, 1994; Saks Berman, 1989). However, Native Americans have received little attention by organizational theorists. Research has tended to focus on social problems, such as alcohol abuse, dropout and suicide rates, instead of issues related to the workplace (Medicine, 1988). Another tendency has been to group all tribes into a single category without regard for socioeconomic status, tribal-specific structures, educational achievement, lifestyle patterns, or gender. As a result, no clear constructs have emerged. Medicine stressed that the differences in matrilineal and patrilineal family structures precluded a generalization of findings to all tribes. Such reporting accounted for much of the inconsistency and erroneous interpretations found in present research.

Study of Native Americans has been problematic for additional reasons. First, their numbers are small, and their influence historically has been less than that of other minority groups. According to the 1990 census, Native Americans, along with Alaskan natives and Pacific Islanders, make up about 3% of the population (US Census, 1990; USDOL, No 92-1, 1992). Second, there has been a tendency to group their cultural membership in the "white" category, which failed to appreciate their separate ethnicity (Kleinfeld & Kruse, 1982). This research included surveys conducted by the U. S. Department of Labor (USDOL) and much of the available research on gender work. Finally, many of these studies did not include labor that was not covered by employer taxes, such as volunteer work, unpaid work, home-based work, and self-employment. Thus, much current data does not acknowledge the large percentage of Native American women who are self-employed in home-based businesses that is higher than for the rest of the population. Almost 69% of Native American women-owned businesses are home-based (USDOL, No 89-9, 1989).

Theoretical Framework

Issues of workforce diversity, cultural identity, gender, and ethnicity framed the need for this study.

The term workforce diversity concerns issues of culture, gender, ethnicity, age, sexual and religious orientation, minority and social status, and physical and mental disabilities (Thomas, 1994). While any of these elements can lead to different work needs and approaches, perhaps the greatest cause of variance lies in one's cultural and ethnic origins. Work orientations develop at a young age and are greatly influenced by one's socio-cultural referents (Hofstede, 1994; Kelly, 1991; Patterson, Sochting & Marcia, 1992). In fact, one's cultural heritage

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may carry more weight in shaping occupational choices and definitions than organizational cultures (Hofstede, 1994; Laurent, 1986). Thus, a worker's cultural heritage is likely to play a larger role in shaping work approaches and expectations than the culture of the worker's employing organization.

Anthropologists traditionally have provided knowledge about culture. Since the early 1980's, organizational theorists also have found relevance in culture studies. Culture, as a construct of work, was defined in this study as:

> A learned, socially transmitted set of behavioral standards. It is self-expressed and shared by individuals through their personal values, norms, activities, attitudes, cognitive processes, interpretation of symbols, feelings, ideas, reactions, and morals (Morris, Davis & Allen, 1994, p. 70).

This definition suggests that, as a group's culture provides a framework for action and expectation of others, it gives members a sense of shared identity, a common past, and a sense of belonging. This framework provides the means for individuals to find meaning in life and for developing one's self-definition.

Identity is multifunctional and can be thought of in terms of group identity or in terms of individual identity, with the individual having several identities at various levels of relationships at once (Fitzgerald, 1974). One's cultural identity is her identity as part of a group based on cultural or ethnic association; her social identity is a less stable identity that is situation-specific (Fitzgerald, 1974). For example, a Creek woman's cultural identity, at all times, is Creek. However, with a co-worker she might have a social identity as a professional and a social identity as a friend to someone else. Cultural identity then implies stability, while social identities are adaptable, depending upon the situation. Because cultural identity provides a stable identity, while the social, situational identity is more flexible, one should consider the impact that cultural identity makes on the social identity as it relates to the workplace. Cultural identity upholds the values and belief systems one has; therefore, it is important for employers to know what the workers' individual cultures value in order for the employer to know how to motivate workers. In this way, employers can alleviate some of the problems associated with frequent employee turnover and dissatisfaction. For women who choose to become self-employed, the motivation again derives from the values and belief systems found in the context of culture.

Gender and Ethnicity as Products of Culture

Gender may be viewed as a learned function of socialization that is biologically assigned (Deegan, 1987; Goffman, 1987). Gender has been linked inextricably to class through its grounding in historical studies of the changes that have occurred in women's involvement in the workforce (Acker, 1989). Gender has been shown to mediate class through sex segregation of work and through the differences found in pay earned by males and females (Acker, 1989). How women, in general, are defined in the home and at work is changing (Deegan, 1987). The phenomena of change clearly characterize the roles of Native American women (LaFramboise, Heyle & Ozer, 1990).

Early feminist literature focused on the lack of attention paid to gender within existing theories (Franklin, Lury & Stacey, 1991). These feminists brought to light such concerns as male violence, sexuality and reproduction, and female oppression, in general, topics that had not been of interest in male-dominated research. While many of these studies emphasized the similarities among women's experience, Franklin et al. proposed that the differences in these experiences have been neglected as a result. The differences they pointed out that should be emphasized include ethnic identity, nationality, class, and sexuality. Some feminist views supported the understanding of the oppression of women. These perspectives pointed out the differences in the patterns of the lives led by women and by men (Maynard, 1994). Reid and Comas-Diaz (1990) also found gender research inadequate by neglecting issues of ethnicity. Likewise, ethnic research typically failed to include gender issues. In their review of the gender literature, Reid and Comas-Diaz found that, professionally, women were not valued equally with men, either monetarily or intellectually. Women were found to experience stress and low self-esteem in their various roles as a result of gender-typed expectations.

Diversity research has failed to address diversity among women and has focused instead on the dominant middle class population of women (Reid & Comas-Diaz, 1990). The double influence of gender and ethnic discrimination has influenced one's personal development, yet their combined effects have not been studied sufficiently (Essed, 1991; Reid & Comas-Diaz, 1990). The past 50 years have generated much information about workers, some of which related to women. For instance, Reskin and Padavic (1994) found that gendering occurs as a result of socialization, actions of social institutions, and interpersonal interaction. They identified a "system of social relations" in the way the workplace is organized, a system that contributed to the male advantage. The sexual

division of labor is a feature of work that assigns men and women to different work on the basis of the worker's gender. Yet, which gender is assigned what tasks varies from culture to culture (Reskin & Padavic, 1994). They maintained that women dominate almost the same occupations in 1990 as they did in 1940 and that the devaluation of their work is linked to a gender system that values male over female work. The more women found in a job field, the less they earn as compared to men in male-dominated job fields.

Focus Questions and Methodology

D'Andrea (1994) indicated that studies in this area have relied upon non-culturally normed instruments that are not appropriate for research with Native Americans. Therefore, qualitative methods were needed to overcome such norming barriers. By providing personal narratives in the emic or the informant's perspective (Pike, 1966), this study provided information through the Native American woman's voice. This kind of understanding uncovered the underlying perceptions and beliefs that influenced expectations for work approaches and interactions. Using narratives to give voice to Native American women enables them to tell their stories in their own words, thereby facilitating their "rediscovery of womanhood" (Greenman, 1996, p. 24).

These issues called for research on the Creek feminine perspective of work through qualitative means. In responding to the call, the following questions guided the research:

1. How do Muscogee (Creek) women define work?
2. What are the influences on their work choices?
3. What motivates them to do the work that they have chosen to do?
4. How do they perceive the dual effects of gender and ethnicity on their success as workers and on career choices?

It is important to note that these questions did not constitute testable hypotheses, but rather they provide a focal point that guided the collection and analysis of data.

The lead author went into this study knowing that there were many cultural differences in the Native American tribes of the U.S., yet the degree to which the available information about Indians described the circumstances of the Muscogee (Creek) people was unknown. For Native Americans as an ethnic group, the literature and census records indicated poverty level existence, high unemployment, high incidences of alcohol abuse (and related illnesses), diabetes, and tuberculosis, and low levels of educational attainment. Determining to what degree such conditions were present in the Muscogee (Creek) Nation was of primary interest to her.

As a "thin blood," she had wondered how these people would receive her. Knowing their hesitation to open up to researchers, she was unsure whether she would be accepted as Creek or would be viewed as non-Indian. Her previous experience with Indians had shown her that their communication styles differed from that of the mainstream society to some extent (that is, they do not rely on constant eye contact when talking), as did their social interaction styles (that is, there are many gendered role designations that, in some instances, preclude male-female interaction).

Multiple personal guided interviews (Spradley, 1979) were conducted with a purposeful sample of 16 Muscogee (Creek) women from rural east central Oklahoma. Three months of fieldwork that occurred in the form of four visits over a period of one year were required to collect the data. All of the informants were at least 33 years of age to correspond to an age range feasible for assuming their having experienced life sufficient for them to know the range of activities available to women of their culture. Ages ranged from 35 to 84. Educational levels ranged from eighth grade education at an Indian boarding school to a master's degree from a public university. Only two of the informants were not high school graduates. All of the informants were raised in the area where the data were collected.

To ensure the accuracy of the findings, several methods were used (Lincoln & Guba, 1985). Triangulation of methods (ethnographic interviewing, document analysis, and participant/unobtrusive observation) provided a means for verifying information received by one method through use of other methods. For example, what participants revealed in interviews was substantiated through observation. Further, member checks were used to ensure that understanding was correct. Each participant was sent a verbatim copy of her interviews for review and correction. Peer debriefing with Indians and non-Indians was also used to ensure correct understanding of the data. Using these techniques, the accuracy of the findings was assured.

Unobtrusive and participant observations (Merriam, 1988; Bernard, 1994; Spradley, 1979) took place in a variety of situations that included, for example, traditional ceremonies and dances, church services, community centers, council meetings, tribal offices, a job fair, Creek homes, and powwows. Document analysis included the

review of tribal documents, local and tribal newspapers, and material from the tribal cultural preservation office library and the Creek Council House Museum library.

While in the field, the lead author took the first three interview transcriptions and coded them, using the causal comparative method of analysis. Using 3x5 index cards, she developed an initial scheme of coding. As subsequent interviews were recorded and transcribed, she continued to code and recode them, reworking the coding scheme as needed. The resulting coding scheme included three categories with 32 subcategories. One category, Views on Work, included, for example, definitions of work, kinds of work done, views on education/skill acquisition, how work was chosen and how they felt about work. The category, Being a Creek Woman, included what it means, traditional and modern stances, how learned, feelings about Creek/non-Creeks, role designations, and Creek vs, female identity; and the category, Creek Culture, included family relationships, tribal beliefs and values, humor, cultural learning, and feelings about the past. The coded interviews and other coded data sources, including observations, field notes and logs, were input into QSR NUD-IST software, making the massive amount of coded data more manageable. To ensure that her own assumptions and perspectives were not clouding her insight into the data analysis, data were separately coded by another researcher, and the resulting coding scheme was compared to her own.

Results, Conclusions, and Limitations

In studying the unique heritage of Creek Indian women, this research shed light on how cultural referents can lead to differences in workplace behavior and expectations, while contributing to our understanding of little known American female minorities. The development of identity for Creek women was influenced by the extended family, by their shared heritage, traditions, culture, and language, by others' perceptions of them, by a sense of belonging, and by their pride in being Creek women. Their ethnic attachment was to Native Americans, rather than to other ethnic minorities or Whites. Like other Native American women, they felt a sense of duality from working in the mainstream and in returning to their homes where a different set of customs prevailed. They felt the most attachment to the extended family, the clan, their tribal town, to Creek people, then to Native Americans, and lastly to the mainstream American culture. Likewise, the data showed that Muscogee (Creek) women felt a stronger bond to the cultural heritage of their birth than to the occupational or organizational culture associated with the nature or habitat of their work. This finding did not vary as women became more educated or had more work exposure to the mainstream American culture.

The Muscogee (Creek) women followed career paths that began with work using the skills they learned growing up. These skills were either used to secure work in the public sector or in paying home jobs. At a later time, typically when survival needs were met, the women included community and/or volunteer work in their lives. This work helped them to meet responsibility they felt to help others and to preserve the Muscogee (Creek) culture. Through their lives the home work continued, strengthening the bond with familial others. At or near retirement, the work focused on home work and community/volunteer work. The model for ideal work for the women was one that incorporated their values, that enabled them to preserve the Muscogee (Creek) culture, that facilitated their involvement in family activities, and that enabled them to be of help to others of their cultural community. Whether Creek women chose to work for pay in the home, i.e. as a babysitter or housekeeper, or in public, that is, outside the home, i.e. as a teacher, nurse's aide, or waitress, they were concerned for others in their cultural community and wished to perform their work in a way that would support their heritage. This characteristic was an extension of their familial, communal nature.

Many theories of career development fail to consider that minorities, in general (Cohn, 1997), and Native Americans, in particular (Bataille & Sands, 1984), experience external constraints that hinder their career planning efforts. Scholars noted that minorities are typically more concerned with survival needs and concerns about cultural preservation. Therefore, the idea that work is a reflection of self-concept and personal fulfillment is not the perception that minorities in the U.S. have about work.

Data from this study substantiated research on the value systems of Native Americans as being different from those of mainstream America (Red Horse, 1980; Edwards & Edwards, 1980; Olson & Wilson, 1984) in terms of communication styles, spirituality, role designations, perceptions of time, and views toward collectivism and individualism. An overriding aspect of the Indian value system is its emphasis on harmony with nature, the tribe, and within the individual. A strong attachment to their sense of homeland was an essential ingredient that caused Muscogee (Creek) women to feel strong connections to their family homes, their hometown area, and to lands presently and previously held by their people. Thus, it is not surprising that the informants in this study saw their role in preserving the culture as more important than personal professional goals. This finding is consistent with the

literature on collectivism (Triandis, 1995). Finally, data from this study also found the Muscogee (Creek) culture more in line with the more nurturing attributes of feminist cultures as defined by Hofstede (1991). These values place importance on helping others, preserving the environment, higher government expenditure on welfare issues, complementary roles for each gender, and conflict resolution by negotiation and compromise. Both Hofstede and Triandis have characterized the mainstream American culture as possessing contrasting values of individualism and masculinity. Finally, data from this study illustrated change in role expectation and values identified in previous reviews of literature on Native Americans (Sattler, 1995). For example, little evidence of arranged marriages among Muscogee (Creek) women was found. Moreover, the informants indicated that women in their culture increasingly played leadership roles in their tribes and outside their tribal communities.

An ironic finding from this study that substantiated Medicine's (1988) work is that, as Muscogee (Creek) women attempted to provide service to their community by becoming better educated, they limited their opportunities to marry within the tribe. Upon returning home from, in particular, university instruction, they were viewed with wariness and perceived as less Indian after having spent time in the mainstream culture. This cultural conflict may discourage Muscogee (Creek) women from pursuing higher education. In addition, there was a general assumption that a woman's place was in the home, taking care of the family and teaching the customs of the Creek people. As a result, when women did work outside the home, there was guilt on their part and tension in family relationships, when the men in their families had different ideas about their roles. This finding was especially true in more traditional homes, where there had been little exposure to the mainstream culture. Likewise, the more traditional a woman, the less comfortable she felt working with non-Native Americans.

This study was limited to the perceptions of women. Future studies might include the perceptions of Muscogee (Creek) men about women's work or about their own ideas of work. Comparison studies with other tribes could shed light on the generalizability of a set of pan-Native American beliefs about work. Researchers might also assess the differences in the degree of identity salience for traditional and modern Creek women toward the tribe versus the degree of identity for the occupational subculture in which they work. Further, do women in certain subcultures feel more identity with their tribal traditions than do women in other occupational subcultures? For example, do Native American women, in general, and Muscogee (Creek) women, in particular, who are teachers identify themselves with the subculture of teachers more than similar women who are nurses?

How This Research Contributes to the Practice of HRD

We know little of the forces that influence workforce diversity (Choudhury, 1996; Creech, 1995). Far too often managers and human resource professionals rely on vague constructs, such as empowerment, or on programs, such as affirmative action (Dooley & Rice, 1995). Seldom do we delve into study of the different realities about the work held by women and men and by different minority and ethnic groups. This issue has become increasingly problematic as the composition of America's workforce has changed. The findings emphasized the importance of the Muscogee (Creek) culture to the development of the women's values, beliefs, and attitudes about work. The strength of the influence of tribal culture on their work attitudes and choices has implications for HRD in terms of addressing the leadership, communication and training needs of Muscogee (Creek) women. The following points offer a few examples of how the findings from this study might influence how HRD professionals work with and prepare others to work with Native Americans.

Data from this study corroborated reported views that Native American women have about leadership differing from that of the mainstream American culture (Fernandez, 1981; Meyer, 1971). These findings indicated a preference for a consultative and participatory approach to management, as well as a need to discuss issues as a forum. This tendency reflects those approaches that council members take in tribal meetings. Moreover, women in decision-making positions did not see themselves as leaders in an authoritative sense, but rather they saw themselves as service providers. Thus, the emphasis was how they, as managers, could facilitate the work of others. These findings are consistent with the literature on collectives as well as feminist societies, supporting the emphasis earlier reported in this study on providing service to others. HRD practitioners can use these findings in developing training designed to help managers customize their approaches to working with Native American employees and managers.

Career counseling and strategies need to recall the importance of cultural preservation as a motivator in career decisions. Career paths that permit Native Americans, in general, and Muscogee (Creek) people, in particular, to care for and protect their tribe may be more attractive. Likewise, career counselors should recall that bonds to one's cultural identity would take precedence over professional or organizational identities. In turn,

managers and HRD counselors should also be cognizant of the sense of duality and the resulting tension that Native Americans may feel when working in the mainstream American culture.

HRD professionals should also be aware of a difference in communication styles when working with Native Americans, in general, and Muscogee (Creek) women, in particular. As in all collectives, Native Americans place value on social relationships in establishing the trust needed for cooperation and open communication. A sense of group solidarity drives whom Indians are more likely to feel comfortable confiding in and whose counsel they are most willing to accept. The Muscogee (Creeks) were also found to be an oral culture who express themselves through stories. This form of communication is especially powerful because of the lessons that it conveys. The informants in this study frequently answered a question with a story. HRD professionals and other management personnel might employ storytelling techniques as described by Hansen and Kahnweiler (1993) to convey important organizational points and to learn more about the perspectives of this population.

Finally, Earley (1994) emphasized the need for trainers to consider the individualism/ collectivism dimension when preparing curricula and activities for classroom training. According to Earley's findings, collectivists had better performance from group-focused training, while individualists experienced greater impact from self-focused training. Because Muscogee (Creeks) are collectivists, it follows that they would respond to participatory small group training opportunities.

Summary

This study used ethnographic techniques to explore how Muscogee (Creek) women perceive the work they do. As members of a collective, matrilineal culture, there was a strong emphasis on the preservation of their cultural heritage and on a desire to serve their tribe. These differences affected the informants' work and career development motivations. Likewise, their expectations for management, communication, and training styles were influenced as a result of their cultural norms. As HRD specialists and researchers, we should be concerned about the developmental needs of ethnic minorities and adapt.

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The Effect of Perceptual Learning Style and Self-efficacy on Preferred Instructional Method in an Advanced Technical Program: A Comparison of Computer Based Training and Lecture

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HRD departments are continually looking for more efficient ways to train employees. One training method that holds great promise is computer based training (CBT). Research has shown that CBT is effective, however the level of effectiveness varies with the trainees' level of self-efficacy. Another factor that needs to be studied is the effect of perceptual learning style and self-efficacy on preference for method of instruction. This study illuminates the effects of learning style and self-efficacy on trainees' preference for CBT or classroom instruction.

Keywords: Learning Style, Self-Efficacy, Instructional Methods

Harp, Taylor, and Satzinger (1998) stated:

> Corporate spending for training has risen to over $40 billion each year... and a large portion of that is spent on training for computer software. A recent survey of Fortune 500 companies found that in some industries, companies dedicate as much as 5 percent of their information system budgets to training. (p. 271)

Additionally, Christoph, Schoenfeld, and Tansky (1998) reported that corporations competing in the global market face the challenge of effective human resources training. They identified self-efficacy as one potential barrier to effective computer based training, and urged that barriers to the use of multimedia-based training be identified to enhance the success of computer-based training efforts.

Research by Cherry (1981), Butler-Tindell (1994), Harrison, (1997), and Parry, (1997) has shown that trainees exhibit different perceptual learning styles. The differences in perceptual learning style have been shown to be a factor in college course selection (Butler-Tindell, 1994). Perceptual learning style preference also varies by age and education level (James & Blank, 1991).

If corporate trainers are to achieve effective results from computer-based instruction and get the most benefit for training dollars spent, it is important for practitioners to be aware of which training method is best to use with their employees. Some employees may benefit from CBT while others may benefit from classroom instruction. James and Galbraith (1985) stated that "individuals who work in their dominant style(s) experience more success and feel a sense of calm and control".

This research explores the effect of self-efficacy and perceptual learning style on trainees' preference for computer-based training or classroom training. The results of this research will help HRD professionals determine which instructional methods to use with employees of differing computer self-efficacy and perceptual learning styles.

Theoretical Framework

For years, trainers attempted to teach all learners in the same way. Adults taking instruction were educated in structured classroom settings where the trainer dominated the instructional process. The educational processes used were as much a method of control and socialization as a means of education. This educational process was the result of the application of Taylor's management theory to education (Goodman, 1995).

A shift in focus began when theorists proposed that adult learners were individuals who had different needs in the learning process. Learning style theory stated each learner brought heritage, emotion, socialization, and experience into the learning process (Thelen, 1960). French (1975) proposed a learning-style theory based on the way one accepts input from the senses. He proposed four learning styles that included perceptual, cognitive, emotional, and social. Perceptual learning style involved the way one gathered information through the senses.

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Cognitive learning style referred to the processing of accumulated information. Emotional learning style concerned the feelings, attitudes, and personality traits that affected the information gathering, knowledge building, and application of knowledge. The social learning style reflected social sets that could enhance or inhibit the learning process (French).

The focus of the current study was the seven perceptual learning styles proposed by French (1975) and first tested by Gilley (1975) using the Multi-Modal Paired Associates Learning Test (MMPALT). French (1975) asserted that individuals receive information through all five senses, but had a preference for using one or two of the senses. If information was gathered through the dominant modality, learning took place more readily. This theory was supported by a study by James and Blank (1991).

As the concept of learning styles gained recognition among educators, curriculum developers began to look more closely at the learning process and designed programs that attempted to fit the learner. The introduction of computer-based training (CBT) was a result of the "learner-centered" training concept. The use of computers allowed educators to supplement standard instruction methods with additional drills and practice, tutorials, and simulations (Steinberg, 1991).

Research by Ayersman and Minden (1995) focused on making CBT more learner-centered. The researchers reported that the access to new technology would aid educators in the development of learner-oriented instruction. Research in this area focused on improving the delivery system and who controlled the learning process. However, Christoph, Schoenfeld, and Tansky (1998) reported self-efficacy was a factor in successful use of computer instruction. Bandura (1986) defined self-efficacy as "people's judgements of their capabilities to organize and execute courses of action required to attain designated types of performance".

Christoph et al. tested two directional hypotheses and found:

1. Students with prior exposure to multimedia-based courses had higher levels of existing self-efficacy than did students with no exposure to multimedia courses.
2. Students with prior exposure to multimedia-based courses had higher levels of developed self-efficacy than did students with no exposure to multimedia courses.

Hasselbring (1986) reviewed over 30 studies on CBT versus lecture on achievement in a number of academic subject areas including accounting, biology, chemistry, English, and mathematics. He developed the following conclusions:

1. When comparing CBT and traditional instruction, individuals receiving CBT demonstrate equal or better achievement.
2. Subjects obtained equal or better achievement in less time with CBT than with traditional instruction.
3. The positive effect on learning achievement occurred regardless of the type of CBT used, the type of computer used, or the age range of participants.
4. The use of CBT improved student attitudes toward the use of computers in a learning environment.

Kulik and Kulik (1991) evaluated 154 studies focusing on the effectiveness of CBT. They reported that students accomplished the same objectives in two-thirds the time of conventional instruction. Kulik and Kulik also concluded that in most cases subjects completing CBT attained achievement scores that were 12 percentile above conventional instruction.

The review of the literature to supported CBT as an instructional method. However, the review did not indicate that perceptual learning style or self-efficacy had any effect on the type of instruction preferred in a training situation. It is this combination of perceptual learning style and self-efficacy in the use of CBT that is the purpose of this study.

Research Questions

1. Did adult learners in an advanced professional training program exhibit the seven perceptual learning styles as described by French (1975)?
2. Did the adult learners' preference for instructional method vary with perceptual learning style strength?
3. Did the adult learners' familiarity with the computer effect their instructional preference for CBT or classroom instruction?

Methodology

Population and Sample

Dental hygiene students (N = 27) were tested for learning style preference using the MMPALT-III. Subjects were invited to participate and received an informed consent letter prior to testing. Participants were first given the MMPALT-III then the Instructional Preference Survey (IPS).

Instrumentation, Reliability, and Validity

The MMPALT-III was considered to be a valid and reliable test for perceptual learning style. Cherry (1981) added the olfactory element to Gilley's original MMPALT instrument and measured the learning styles of 96 adults ranging in age from 21 to 76. Statistical comparison with Gilley's study (1975) established concurrent validity. The highest correlation between the populations was r = .89 and was considered evidence of concurrent validity (Butler-Tindell, 1994). Research by James and Blank (1991) provided evidence of reliability of the seven MMPALT sub-tests. The researchers collected data on learning styles of 480 adults ranging in age from 19 to 86. Test-retest reliability was calculated: Print r = 0.85, Visual r = 0.87, Aural r = 0.80, Interactive r = 0.65, Haptic r = 0.74, Kinesthetic r = 0.67, Olfactory r = 0.73. Precise protocols and scripts were used in introducing each of the seven learning style sub-tests.

An instructional preference survey (IPS) was designed to measure the participants' familiarity with the use of computers and their preference for either computer-based training or classroom instruction. Research by Christoph et al. (1998), Wenzel and Gotfredsen (1996), Plasschaert, Wilson, Cailleteau, & Verdonschot, (1995), and Liu and Reed (1994) provided the basis for developing the IPS. The survey consisted of open-ended questions as well as Likert-type items. To assure construct validity a panel of experts in adult education, corporate research, and dental research reviewed the survey design.

The independent variables were perceptual learning style and self-efficacy relative to using computers in the learning process. The dependent variable was instructional preference of the participants.

The variables were operationalized through two instruments: the MMPALT-III for learning styles and the Instructional Preference Survey that was used to determine computer self-efficacy and preference for classroom or computer-based instruction.

Data Collection

The individuals who participated in the study were selected from the population of dental hygienists at a large metropolitan dental school. Each student was tested following the guidelines of the MMPALT-III designers. Demographic data MMPALT-III data were collected from October to December 1998. The tests were scored and the number of correct responses were transferred to a master sheet which contained only the subjects code number, test scores, and demographic data.

Data Analysis

The data were transferred from the master sheet to SPSS for Windows 7.5 for analysis. The data means were calculated to determine the dominant group learning style to answer question 1 and the means were used to rank order the sample group modality preference. The preference for CBT or classroom instruction and computer self-efficacy ratings (high or low) were used in calculating a series of one-way analyses of variance (ANOVAs) to determine if perceptual learning style had any effect on either preference for instruction or computer self-efficacy.

Results and Conclusions

The conclusions can not be generalized beyond this study, but do offer some insight into the usefulness of knowing trainees' preference for instruction in an HRD situation. The rank and mean scores of the perceptual learning styles indicate that, as a group, the participants prefer to learn through visual images, use of hands, and discussion (Table 1).

Table 1

Rank and Mean Scores of Perceptual Learning Styles.

Perceptual Style	Rank	N	Range	Min	Max	Mean	Std. Dev.
Visual	1	27	8	2	10	7.43	2.03
Haptic	2	27	9	1	10	6.80	2.70
Interactive	3	27	8	2	10	5.97	2.33
Aural	4	27	8	1	9	5.87	2.43
Print	5	27	8	1	9	5.13	2.13
Kinesthetic	6	27	7	1	8	3.60	1.61
Olfactory	7	27	5	0	5	1.97	1.50

Participants were almost equally divided between high and low self-efficacy as shown in Table 2. All participants except one were female so no gender statistics were calculated. Self-efficacy (SE) was coded 0 for low SE and 1 for high SE. There was no difference in self-efficacy by age.

Table 2

Computer Self-Efficacy Ratings

Self-efficacy	Frequency	Percent	Cumulative percent
High = 1	13	48.1	48.1
Low = 0	14	51.9	100.0

Although the participants' feelings of computer self-efficacy were almost equally divided between high and low, their preference for instructional method was skewed toward classroom instruction over independent computer-based training modules (Table 3).

Table 3

Instructional Preference Among High and Low Self-Efficacy Students

Self-efficacy	Instructional preference	n	Percent	Cumulative percent
High	Classroom	11	40.7	40.7
High	CBT module	3	11.1	51.8
Low	Classroom	13	48.2	100.0

Of the participants tested, 88.8% preferred classroom instruction even though 48.1% indicated they were confident they could succeed in a computer-based training module.

Question 1 is answered in the affirmative. The learning styles presented by French (1975) were present in this population The rank of the perceptual learning style preferences compare closely to other populations tested. Visual styles is dominant in all populations and haptic and interactive rank either second or third and vary with the population tested.

Question 2 is answered in the negative. Perceptual learning style had no significant effect on choice of instructional method.

Question 3 is answered in the negative. Familiarity with computers had no significant effect on preference for instructional method. Both high and low self-efficacy students preferred classroom instruction to CBT modules.

Contribution to New Knowledge in HRD

This research benefits both adult educators and adult learners. Educators have incorporated CBT in instructional methods since the late 1950's (Loughary, 1966). At the inception of this study, there had been no study reported on the individual's perceptual learning style or comfort level with using computers and the relationship to preferred instructional method. This study adds to the knowledge relative to identifying which individuals gain the most from CBT. Even though an individual may be computer literate and be high in computer self-efficacy, the results of this study indicate that classroom instruction is still the preferred mode in instruction for 88.8 percent of the participants.

The administrators involved in directing adult education programs need to be aware of trainee preferences. Research on instructional method indicates that adults learn best in their preferred perceptual learning style, it may also be that trainees in HRD programs learn best in their preferred method of instruction. Corporations are spending millions of dollars to train employees through computer-based training methods. This research indicates that classroom instruction should be included in the education process even where CBT modules are used for basic instruction.

Implications for Future Research

Further research is indicated in this area. Suggestions for research are:

1. Test groups for computer self-efficacy, establish a control and two treatment groups to see if learning differences occur when students are placed in CBT and classroom situations.
2. Expand the population being tested to develop a larger N.
3. Change the test population to one that is less academic and more the focus of HRD training to see if instructional preference is affected by perceptual learning style or computer self-efficacy in another population.

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Subordinates' Information Seeking Behavior: Empirical Investigation of the Effect of Perceived Leadership Style and Individual Differences

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This paper is aimed at offering additional insights into subordinate-superior interaction in an organizational setting. Transformational and transactional theories were utilized to postulate that the content and frequency of information sought by a subordinate from his/her superior will vary depending on that superior's leadership style. This relationship was tested with individual difference predictors in mind. Empirical results, based on the field study using survey data and longitudinal checklist recording, show general support for the model. Implications are drawn for the role of information seeking for both managers' and subordinates' development and career advancement.

Keywords: Information Seeking; Leadership Style; Subordinate-Superior Interaction

In this paper I focus on subordinates' information seeking behavior and test suggested expansion of available models used to determine the sources of influence (Madzar, 1998). The hypotheses tested herein are based on the assumptions that: an important part of managers' task is to act as a source of information to their subordinates; and that managers are often characterized as employees' major link to the information environment. In this light, I explore the seeking process in terms of frequency and types of information sought by subordinates. The focus is on the influence of a superior's leadership style on subordinates' seeking behavior, in the midst of powerful evidence pointing to a strong relationship between leadership style and subordinates' satisfaction and performance. Lack of field research that deals with source attributes in general, and with superior attributes in particular, seems paradoxical. Exploratory in character, this study examined the intricate nature of the influence of such attributes, by using transformational and transactional leadership style frameworks (Bass, 1985). For full theoretical development of arguments that led to the set of hypotheses stated below, please refer to this author's paper presented at the 1998 AHRD conference in Chicago.

Transformational and Transactional Leadership: Effect on Subordinates Information Seeking Patterns

First, we can expect a more involved information seeking activity on the part of a subordinate from a transformational leader as this style will lower inference, face loss, and effort costs (Ashford & Cummings, 1983) by mentoring, one-on-one contact and intellectual stimulation.

H1: Perception of a superior's leadership style will add to the prediction of the frequency of information sought by a subordinate in that frequency will be higher if a superior is perceived as a transformational, rather than transactional leader.

Second, high probability of negative reinforcement or punishment in seeking performance feedback from a transactional leader will negatively influence the amount of feedback sought. Conversely, the style seems to encourage seeking technical and referent information, as they are distanced from self. Technical information is typically task-related and does not involve feelings or judgements. Seeking referent information can be regarded as a preparation for, or a confirmation of this exchange-based relationship.

H2: The frequency of seeking technical and referent information from a transactional leader will be higher than the frequency of seeking performance and social feedback from such a leader.

Next, intellectual stimulation and the insistence on the continuous development exercised by a transformational leader enhance a subordinate's interest in the process of work, not only its outputs. This interest, combined with enhancement of employee trust (Podsakoff, MacKenzie, Moorman, & Fetter, 1990) contributes to the amount of process performance feedback sought.

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H3: Frequency of seeking process performance feedback, as compared to outcome performance feedback, will be higher if subordinates seek the feedback from transformational than from transactional leaders.

Exploring the Effect of Individual Difference Antecedents on the Focal Relationship

Also included in this study's model are those individual difference constructs for which there is considerable evidence of influence on feedback/information seeking. Following on the advice of Ajzen (1988) in regard to the conceptualization of individual difference constructs, I advocate the use of their more domain-specific levels that pertain uniquely to organizational settings.

Closely examined in the OB literature, job-related tolerance for ambiguity--JRTA (Benett, Herold, & Ashford, 1985: Norton, 1975) has been found to be negatively related with feedback seeking frequency (Ashford & Cummings, 1985; Fedor, Rensvold, & Adams, 1992). In the case of transactional leadership style, a subordinate-leader interaction is reduced to a minimum, and as such it provides for higher levels of the ambiguity of the situation and uncertainty about outcomes among subordinates who consequently lack referent and outcome performance feedback/information.

H4: The higher the subordinates' JRTA, the more referent information and outcome performance feedback they will seek from a transactional leader, as compared to other information types.

Recent feedback-related research on work domain--individual goal orientation has been grounded in social cognitive psychology (Dweck, 1986). VandeWalle and Cummings (1997)built on the distinction between two types of individuals and their behaviors--those with learning goals who focus on improving their ability, and those with performance goals who focus on proving their ability, all according to their implicit theories of intelligence. Because learning oriented individuals seek more feedback about their work, even under challenging conditions (VandeWalle & Cummings, 1997), it seems plausible that:

H5: Learning oriented subordinates will seek more process performance feedback in general than will their performance oriented peers, from both transformational and transactional leaders.

It has been suggested that subordinates high in self-esteem, are less influenced by the quality of their relationship with their feedback source in deciding whether or not to seek feedback (Vancouver & Morrison, 1995). On the other hand, subordinates with low self-esteem, needing approval and self-affirmation, as well as in search of self-diagnosticity, may take advantage of the developmental support they receive from transformational leaders, and become further intimidated and alienated by the possible negative reinforcement practices of transactional leaders. In general, it is expected that organization-based self-esteem--OBSE (Pierce, Gardner, Cummings, & Dunham, 1989), will influence the relationship between subordinates' information seeking and a perceived leadership style such that:

H6: The level of subordinates' OBSE will be inversely related to the amount of information they seek from transformational, and positively related to the amount of information they seek from transactional leaders.

More generally, and according to the behavioral plasticity theory (Brockner, 1988), subordinates with low OBSE are likely to seek information that appears less costly and does not have the potential to further deteriorate their sense of self-identity. They will thus be reluctant, in general, to seek information about self.

H7: The lower the subordinates' OBSE, the more technical and referent information they will seek, as compared to performance and social feedback, from both transactional and transformational leaders .

Methods

Sample

The participants in the study were employees of a large Midwest-based therapeutic medical technology company, a leader in a highly competitive global environment. The study data were collected from a homogenous sample of 75 predominantly white male electrical and software engineers (82.7% were male, and 96% were white),

who all work in the same division, performing essentially same tasks. All respondents have worked in the Division over six months. All participants had reported to the person they assessed as their immediate supervisor for at least three months prior to this study.

As described, the sample is a reflection of the following research question-driven requirements. First, to avoid data contamination, all participating employees belong to the same organization, and perform very similar tasks. This isolates the influence of a differing organizational/divisional culture that affects communication norms or customs, on the relationships of interest. Some organizational cultures tend to 'institutionalize' certain communication patterns which may affect the display of the information seeking behavior, and the variance among them would have to be accounted for in a cross-sectional design. Ashford & Northcraft's (1992) finding that publicness of the feedback seeking context is negatively associated with feedback seeking frequency is an example of this concern. Also important is the need to minimize the variance of the influence of the nature of the task itself on the information seeking behavior, both in regard to type and frequency. Finally, on a more general level, a single site design reduces a problem of morphogenesis, often encountered in longitudinal organizational research. Various components of most organizations are always changing at various rates and for a variety of external or internal reasons. With a single-site design, we assume that behaviors and attitudes of all participants are affected by the same set of changes. Specifically in regard to information seeking, such changes may be associated with contextual uncertainty and role ambiguity (Ashford & Cummings, 1985).

Second, newcomers to the organization were excluded from the study because the socialization literature has pointed to the differences in the information seeking patterns between newcomers and already socialized employees (Morrison, 1993; Ostroff & Kozlowski, 1992). The literature is not clear on determining the length of the socialization period which ranges from one month to one year (Fisher, 1986). Upon reviewing the task and training requirements of this sample, a six month guideline was implemented. Third, as the respondents assessed their superior's characteristics and behaviors on a leadership instrument, I assumed they needed to have spent at least three months as that superior's subordinate in order to be able to credibly assesses their perceptions. Fourth, the choice of the organization itself also concurs with the theoretical assumptions about the emergence of transformational leadership in crisis. Acknowledgment of a highly competitive global market, and the sensitive nature of medical products, create pressures on these employees, in their day-to-day operation (George, 1995).

Procedure

The research was designed to utilize field setting and survey methodology, to maximize the exploitation of a natural environment, as well as real-time, semi-longitudinal data collection. The data were collected in two phases.

Phase 1: Survey. The subordinate questionnaire includes the items related to the independent variables in the study: perceived leadership style, OBSE, JRTA, work-domain goal orientation, as well as demographic information. Leadership style was assessed with the Bass and Avolio (1991) 5X- rater version, of the Multifactor Leadership Questionnaire (MLQ) which contains 68 items on a 5-point scale. An approximate cut-off point of 2.5 was used to determine the style - transformational, transactional, both, or none- which is in accordance with other studies using this instrument. As can be seen from the hypotheses, this study is interested in the transformational/ transactional leadership dichotomy. OBSE was assessed with the 10-item Pierce *et al.* (1989) instrument on a 5-point scale. JRTA was assessed with a 3-item subscale from Norton's (1975) larger questionnaire, with responses on a 6-point scale. Goal orientation was assessed with the 13-item VandeWalle (1995) instrument, with responses on a 6-point scale. The means across items of the learning and performance scales were taken to represent learning and performance oriented individuals. In the final analyses individuals were considered to be learning oriented/ performance oriented through the dichotomy created by implementing the 3.5 scale score as the divider between the two goal orientations.

The transformational leadership scale had a mean of 2.91 (SD = .32), and the transactional leadership scale 2.70 (SD = .27). High alphas were reported for all leadership dimensions (from .81 for contingent reward to .93 for idealized influence and inspiration). The JRTA scale had a mean of 2.97 (SD = .89) and an alpha of .77, while OBSE scale had a mean of 3.43 (SD = .90) and an alpha of .95. Finally, the performance goal orientation scale had a mean of 2.69 (SD = .67) and the learning scale had a mean of 1.75 (SD = .60). The alpha levels were .87 and .93, respectively. Scores on the four scales were either uncorrelated or showed low correlation ($r = .23$; $p < .05$ between goal orientation and leadership style; and $r = .22$, $p < .05$ between OBSE and goal orientation).

Phase 2: Recording of information seeking patterns. Employees recorded daily in a behavior checklist the type and frequency of information they sought from their immediate superior. This phase was four weeks in duration, to allow for an information seeking pattern to emerge (20 days total). The respondents also recorded an unusual circumstance (when a subordinate or superior is sick, on holiday, etc.) which prevented them from seeking

information from their superior on a particular day. The one-way ANOVA, followed by the Tukey method of multiple comparison showed no significant differences in means between the number of 'unusual' days and any of the individual information types sought.

Scores on the dimensions of the main dependent variable, i.e., the types of information seeking, were correlated from $r = .43$; $p < .0001$ between social feedback and referent information seeking to $r = .67$; $p < .0001$ between process performance feedback and social feedback seeking. In regard to the distinctness of the five information types, the correlations compare to Morrison's (1993) which ranged between .24 and .75.

This design avoids the differential period problem (Kimberley, 1984) by having the respondents record their information seeking from their superior on a daily basis close to real time, and after they have responded to the items designed to measure their attitudes and perceptions. Also, the use of a true continuous scale for recording the frequency of information seeking episodes, partially accounted for an inherent potential problem with self-reports, which is that respondents may not be entirely accurate in reporting their past behavior.

Analyses

To test hypothesis 1, I used stepwise multiple regression analysis as the research goal is primarily predictive; the number of independent variables is relatively small; and independent variables are not substantially correlated with each other (Cohen & Cohen, 1983). Analyses for other hypotheses were more descriptive and correlational in nature, and thus required a range of simpler tests such as: a simple paired t-test; a one-way ANOVA, in some cases followed by the Tukey's method of multiple comparison; and correlation.

Results

Hypothesis Testing

As discussed, stepwise multiple regression was used to test Hypothesis 1 for the extent of information seeking dependent variable, as well as all individual information types sought among the subordinate sample. Along with testing for predictive strength of the perceived leadership style, the main effect of individual difference predictors--OBSE, JRTA, and goal orientation--were included in a series of seven regression equations. The equations include each of the five information types sought, a performance feedback composite, as well as the extent of information seeking composite as dependent variables. As seen in Table 1, the hypothesis was supported for all equations. Leadership style entered in Step 1 in all but one equation, with R^2s ranging between .10 for referent information to .21 for outcome performance feedback seeking, and beta weights from .33 to .47. Leadership style's total explained variance for the aggregated extent of subordinates' information seeking was $R^2 = .25$, with beta weight .50.

The contribution of individual difference independent variables was considerably lower. OBSE did not appear as a significant predictor in social feedback and technical information seeking equations, and its overall contribution was $R^2 = .04$, with beta weight -.19. JRTA's R^2s varied between .05 for technical information and outcome performance feedback seeking and .07 for process performance feedback, with beta weights from -.22 to -.23. JRTA did not appear as a significant predictor of social feedback and referent information seeking, and its overall contribution was $R^2 = .10$, with beta weight -.31. Finally, goal orientation only appeared as a significant predictor in process performance feedback seeking ($R^2 = .20$ and beta weight.39), and in social feedback seeking ($R^2 = .06$ and beta weight .25) equations. It did not enter in the overall equation.

A paired sample t-test was performed to test Hypotheses 2 and 3. Hypothesis 2 suggests that subordinates would seek more technical and referent information than performance and social feedback from a transactional leader. The difference in means was significant (with the 2-tail probability of .0001) for the technical-social and referent-social information/feedback seeking pairs. The findings thus provide only partial support for the hypothesis because the difference in means between technical and performance information/feedback sought appears nonsignificant, and also nonsignificant and negative between referent and performance information/feedback sought. Hypothesis 3, on the other hand, suggesting that subordinates would seek more process than outcome performance feedback from transformational than from transactional leaders, was supported. The difference in means for each leadership group was significant for the outcome-process feedback seeking pair, but the t-value is larger for the transformational leadership group (-3.58 versus -2.08).

Hypothesis 4 again tested for transactional leader group only, in regard to the suggestion that subordinates would seek more referent information and outcome performance feedback compared to other information types. One-way ANOVA was performed and followed by the Tukey's method of multiple comparison. The mean response

for JRTA was compared with mean responses on the extent of seeking each of the five information types. The hypothesis was not supported.

Table 1
Stepwise Multiple Regression Results

Info type sought	Step	Beta	R2	F
Extent Aggregate Info Seeking	1:Lstyle	.50	.25	24.49**
	2:JRTA	-.31	.35	19.55**
	3:OBSE	-.19	.39	15.07**
Outcome Performance FS	1:Lstyle	.47	.21	19.10**
	2:OBSE	-.27	.30	15.71**
	3:JRTA	-.22	.35	12.87**
Process Performance FS	1:GO	.39	.20	18.39**
	2:Lstyle	.33	.30	15.38**
	3:JRTA	-.23	.37	14.11**
	4:OBSE	-.21	.42	12.48**
Performance Aggregate FS	1:Lstyle	.48	.22	20.64**
	2:JRTA	-.28	.32	17.09**
	3:OBSE	-.21	.36	13.61**
Social FS	1:Lstyle	.33	.15	13.14**
	2:GO	.25	.21	9.78**
Referent Information S	1:Lstyle	.35	.10	8.15*
	2:OBSE	-.26	.17	7.15*
Technical Information S	1:Lstyle	.40	.17	15.09**
	2:JRTA	-.23	.22	10.43**

** p<.001; * p<.005; N = 75
FS = feedback seeking; S = seeking; Lstyle = leadership style; GO = goal orientation; JRTA = job-related tolerance for ambiguity; OBSE = organization-based self-esteem

Hypothesis 5, suggesting that learning oriented individuals will seek more process performance feedback than will their performance oriented peers from both transformational and transactional leaders, was supported. Results of one-way ANOVA indicate significant F values for both the transactional ($F = 7.01$; $p < .05$) and transformational leadership group ($F = 7.29$; $p<.01$).

Hypothesis 6 suggested an inverse relationship between OBSE and transformational and a positive relationship between OBSE and transactional leadership style. Correlation coefficients indicate only partial support for the hypothesis. OBSE was negatively correlated with the extent of information seeking among subordinates who perceived their leader as transformational ® = -.33; $p < .05$), but the positive correlation for transactional leadership style was nonsignificant.

One-way ANOVA, followed by the Tukey method of multiple comparison was performed to test Hypothesis 7. The prediction that the lower the subordinates' OBSE, the more technical and referent information as opposed to performance and social feedback they will seek from both leader groups, was unsupported. No significant difference was found on any of the above information types for either of the groups.

Discussion

In a series of stepwise regression analyses leadership style emerged as a significant predictor of all information seeking types, and was entered in step 1 in all but one equation. Dependent variables best explained by the model were process and outcome performance feedback seeking. This is not surprising knowing that the conceptual origins of all three individual difference variables in the model were tested mainly in the area of performance feedback seeking research. By comparing the process and outcome performance feedback seeking equations, the value of this Earley, Northcraft, Lee & Lituchy (1990) distinction becomes apparent. The equations differ greatly in regard to the leadership style (R^2 of 0.21 for the outcome versus R^2 of 0.10 for the process feedback seeking), and, to an extent, in regard to the OBSE and JRTA levels of explained variance. Goal orientation, which emerges as the most significant predictor of process feedback seeking, does not even enter in the outcome feedback seeking equation. The danger of collapsing these two performance feedback seeking types into one is shown in the equation with the performance feedback seeking composite. In it, the goal orientation effect is not even entered, thus creating a misleading picture of the overall performance feedback seeking predictors.

The model explained less variance of the other types of information seeking. This, again, is not surprising because the literature on the antecedents of seeking technical, referent information and social feedback from a superior is sparse at best.

The lack of stronger prediction by JRTA and OBSE can, to an extent, be attributed to a small statistical power of the sample size. JRTA did not contribute to the prediction of either social feedback or referent information seeking. This can be explained by the perception many employees hold that social feedback is not directly job-related, and its seeking can therefore be postponed, even if a situation is ambiguous. The same argument may explain lack of contribution of OBSE. Concerning referent information, it is often provided to an employee up-front. (i.e., prior to task execution), and, as such, it does not account for process differences of the two leadership styles. Finally, the lack of OBSE predictive power for technical information seeking can be attributed to the fact that technical information seems to be most distanced from self as it explicitly refers to task-related matters, and as such is unlikely to implicate major consequences for one's self-esteem in the seeking process.

Only partial support was obtained for hypothesis 2. The results attested only to the significant difference in regard to social but not performance feedback, while the prediction was that the subordinates would seek more technical and referent information than both feedback types, from a transactional leader. It is plausible to suppose that obtaining performance feedback was a requirement too important for task continuation or completion, regardless of the costs or consequences involved in seeking it.

Lack of support for the direct relationship between the level of JRTA and frequency of seeking referent information and outcome performance feedback from transactional leaders can be partially explained by a small sample size (N=28). Also, the generally low average JRTA among subordinates might not have produced sufficient variance for multiple comparison analysis. Finally, the lack of support may also be explained by the possibility that the difference in importance of each information type may not be attributed to situational ambiguity, but to the tendency of transactional leaders to provide clarity. They simply know how to tell people what is expected and there may be no need for asking.

Strong support was provided for an argument that learning oriented subordinates would seek more process performance feedback when compared to their performance oriented peers, from both leader types. This finding is consistent with the results obtained for the process performance feedback seeking equation.

The findings concerning the influence of OBSE on the relationship between the leadership style and information seeking behavior suggest that subordinates with lower OBSE will take advantage of the developmental support they receive from a transformational leader, while subordinates with higher OBSE may be less influenced by the quality of their relationship with the leader and will not seek to take the same advantage. A suggestion that the relationship between the level of OBSE and the frequency of information seeking from transactional leader was not supported. Before any conclusions are drawn, one is reminded of the fact that the mean for OBSE across the subordinate sample was generally high. This may have reduced variance even further in an already small sample. Also unsupported was the proposition that the lower the subordinates' OBSE, the more technical and referent information they will seek as opposed to performance and social feedback, from both leader groups. While, again, we can speculate that this suggestion refers only to individuals with very low level of OBSE (Brockner, 1988), and that there were very few such individuals within our sample, larger issues related to the complexity of this construct remain.

In summary of the findings related to the individual difference main effect relationships, we conclude that work-domain goal orientation was the strongest of the three predictors. The findings on JRTA and OBSE need to be

tested on larger and more varied samples. These relations may also need more theoretical refinement before their true influence on the leadership style - subordinate information seeking behavior relationship is established.

Practical Implications

This study conveys important lessons to HRD practitioners. First of all, the results should broaden a practitioner's view of transformational/transactional leader categorization to include the role of an information source, and not just that of an information provider. To enrich the picture of an information seeking component it is necessary to develop and implement training efforts based on the pivotal assumption that subordinates are proactive in their search for adequate feedback/information.

If the results obtained in this study indeed hold after replications in a variety of other organizational settings, with different tasks at hand, then management training efforts should focus on the following objectives: 1)preliminary assessment of the existing leadership style (a shorter, 1996 version of the MLQ instrument is useful); 2) assessment of managers' perceived subordinate information seeking patterns related to the task and broader organization; 3) learning about subordinates' individual characteristics that play an important role in how they choose to seek/not seek information; and 4) understanding of differences in information seeking patterns depending on information type. Even if the training program is not directed at changing managers' leadership style, it should clearly establish the importance of their role as a source of a variety of information types for their subordinates.

OD interventions should first focus on a larger picture of information sources utilized by subordinates, within a broader organizational information environment. In today's complex design, typically encompassing flexible work schedules, virtual office practices, and part time work, this may prove a difficult task. However, only through systematic investigation of the information that employees need, and the assessment of the strategies they have used to get each information type in the past, can we truly assess the specific role of leadership style in this search process. We may well find that leadership training may not be the next logical step, but that structural interventions may yield better results in regard to leader accessibility in general.

Limitations and Future Research

For the reasons outlined above, this study focused on one organization, and a homogenous sample of employees, performing a highly similar task. The study should therefore be considered within such a context. The next logical step should assess the external validity of obtained results by replication of the study in other organizational settings, with other tasks at hand. Only after such extension of this research, can we place confidence in more general statements about the antecedents of information seeking behavior examined herein.

This study only investigated direct inquiry methods of information seeking, when a variety of other modes such as monitoring (Ashford & Cummings, 1983) have been rightly noticed. It has been found that inquiry, as compared to monitoring, is a more costly strategy as it exposes the individual's need for feedback. This need may be interpreted as a sign of uncertainty or insecurity (Ashford & Northcraft, 1992). Therefore, the decision to limit the measurement to inquiry may pose a limitation to realistically assessing feedback seeking patterns.

Naturally, most employees are likely to also seek information from sources other than their superiors. These other sources such as co-workers; task itself; and the organization, may vary in importance to employees in regard to different types of information. The findings on the importance of a supervisor as a feedback source may not hold equally for technical and referent information. Thus, any bias produced by the choice of a specific source is likely to be unequally distributed among the information types included in the study. It should be acknowledged, however, that this study's design was not conducive to collecting such information from subordinates as it would have made a recall activity at the end of the day a more uncertain and difficult process. Also not included in this study was assessment of the quality of acquired information. O'Reilly's (1982) attributes such as: timeliness, relevance, and specificity may be of future interest.

In conclusion, the results of the study suggest that, within the boundaries of the specific organizational setting described, superior's leadership style indeed has a unique effect on each of the five information types sought by subordinates. Exploratory in character, the study provides guidance for further efforts in investigating this salient antecedent.

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An Empirical Study of Age Discrimination in Teacher Selection With Application to HRD

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Research has suggested that age discrimination occurs in teacher selection, due primarily to decision-makers' behaviors. A study was conducted using matched ages for hypothetical elementary teacher applicants and elementary principals to determine whether principals' evaluations of applicants were influenced by principal and applicant ages. Results indicated the possibility of discrimination. The importance of principals' competencies in selection and implications of using the Analysis of Performance Improvement Model to improve their competencies in selection procedures are discussed.

Keywords: Selection, Age Discrimination, Analysis of Performance Improvement

Public education has always been a great interest to society and the business community. Particularly, the quality of elementary teachers is one of the most important issues in education because it can dictate the quality of the future workforce (Flesch, 1966; Los Angeles Times, 1992). To improve the quality of education, public elementary schools have undergone numerous changes, including not only educational methods, but also selection of qualified teachers. The recent strong interest in accountability of public education is related to competency and competency specifications of teachers. Harris and Monk (1992) state that if school personnel focus on the use of competence in teaching and competencies applied to teacher selection, schools can improve the quality of education. Selection is a decision-making process to match the capabilities of an individual with position requirements (Harris & Monk, 1992). This process involves gathering information about candidates (teachers), identifying qualified candidates for positions, and selecting those candidates who have the required levels of knowledge, skills, and abilities (KSAs) in teaching as well as the motivation and potential for performance improvement (Castetter & Young, 2000). In this respect, teachers are selected for their professional credentials, which meet position requirements (Young & Ryerson, 1986).

Within a school organization, teacher selection has been seen mostly as an administrative process, in which school principals are responsible for the entire selection process and decisions in hiring teachers. In other words, the quality of school principals is a critical factor in identifying and selecting highly qualified teacher applicants. This ability among principals lays in their competencies, knowledge, and skills in selection (Castetter & Young, 2000). Harris and Monk (1992) define competence as "demonstrated capability to perform" and competencies as "a description of behaviors and behavioral outcomes." In this regard, quality of competencies enables principals to select highly qualified teacher applicants. In addition, the selection system, including the process, criteria, legal requirements, and methods, also serves a critical function in selection, which contributes to developing the needed quality of school personnel (Castetter & Young, 2000). In summary, selecting qualified teachers is a function of competencies and KSAs of school principals and the selection system, which, when combined, ensure quality education in schools.

Problem Statement

In teacher selection, school principals are responsible for making decisions during the entire selection process. Consequently, the ability to select the best candidate from a group of applicants requires school principals to have high competencies in selection. Therefore, competencies and KSAs of school principals influence the quality of personnel in schools. However, Harris and Monk (1992) point out that principals often make decisions that are based on a combination of intuition, hunches, and behaviors, relative to success in teaching positions, rather than using scientific, legal, and job-related criteria.

Any selection system aims at ensuring the selection of the best applicant based on his or her KSAs and qualifications relative to position requirements, while meeting legal requirements which prohibit any type of

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discrimination. However, studies have shown discriminatory selection decisions (Singer, 1986; Waldman & Avolio, 1986), particularly age discrimination (chronological age) taking place among school organizations, during the selection process, specifically during the screening phase. That is, older teacher applicants, who have KSAs and considerable experience, tend to have difficulty in getting positions, regardless of their teaching performance and qualifications (Young & Allison, 1984; Young & McMurry, 1986). If competencies and KSAs of school principals contribute to selecting highly qualified teachers, and if selection decisions principals make are not based on applicants' professional credentials, it is important to examine whether a selection decision might be interfered with by age discrimination and what might cause these behaviors by school principals during the selection process.

Purpose of the Study

The purposes of this study are to investigate (1) whether older elementary school teacher applicants are discriminated against during the screening phase of the selection process, (2) whether ages of principals evaluating teacher applicant materials during the screening process are influenced by applicant age information, and (3) to provide possible HRD solutions to improve the performance of the principals in the teacher selection process. The study investigates the following hypotheses, which are derived from Social Distance Theory (Bogardus, 1925) and the Attraction-Similarity Paradigm (Byrne, 1971). In these frames, age is conceived as a stereotype perception, as well as a shared similarity. Directed hypotheses were used because specific effects were expected to occur.

> H_{a1}: Younger hypothetical applicants for an elementary school teaching position will be rated higher on both dependent variables by elementary school principals than older hypothetical applicants will be rated on both dependent variables by elementary school principals.
>
> H_{a2}: Younger elementary school principals will rate hypothetical applicants for a teaching position higher on both dependent variables than older elementary school principals will rate hypothetical applicants for a teaching position on both dependent variables.
>
> H_{a3}: Older elementary school principals will rate older hypothetical applicants for ateaching position higher on both dependent variables than younger hypothetical applicants, and younger elementary school principals will rate younger hypothetical applicants for a teaching position higher on both dependent variables than older hypothetical applicants.

Literature Review

Early selection studies, termed "macroanalysis," attempted to establish the reliability and validity of the interview and its relationships with criteria, such as intelligence, cognitive tests, level of sociability and sense of humor. These criteria were considered to predict future performance. More recently, interview methods have been modified (e.g., semi-structured and structured interviews), which has resulted in the improvement of the validity of the interview. However, questions still remain about the interview, relative to its power of predictability for future on-the-job performance (Dipboye, 1992;Wagner, 1949). Later research studies, termed "microanalysis," have focused on the whole selection process, identifying factors related to decision-making in each phase. More recently, research has focused on the screening and interview phases (Singer, 1986; Young & McMurry, 1986). These studies have found that non-job-related factors, such as race, sex, age, stereotypes, and disability status, indirectly affect selection decisions. However, none of these characteristics are directly job-related. Therefore, if any of these characteristics influence a selection decision (hiring, promotion, transfer, training, retirement), that decision will be illegal, unless there is an acceptable job-related reason for the discrimination.

Federal legislation, such as Title VII of the Civil Rights Act of 1964, The Age Discrimination in Employment Act of 1967, The Vocational Rehabilitation Act of 1973, and the 5th and 14th Amendments to the U.S. Constitution prohibit discrimination in any job situation, relative to specific human characteristics (Young & Ryerson, 1986). This legislation and implementing guidelines from federal and state agencies created "protected classes" of individuals and violation of these statutes and guidelines can lead to federal or state prosecution and litigation against specific companies, government agencies, school districts, and schools.

As employees or job applicants get older, prospects for new jobs or significant promotions are perceived to decrease (Waldman & Avolio, 1986). Some studies focused on whether or not management decisions relative to

promotion, training, and physical capability, were influenced by age of applicants (Lee & Clemons, 1985; Rosen & Jerdee, 1976). Singer (1986) studied age as a stereotype perception relative to specific occupations, including accountants, university academics, police officers, medical doctors, and computer scientists, using hypothetical old and young candidates. Results indicate old applicants were not selected, regardless of their performance and their qualifications.

Research concerning age effects on selection decisions has not been limited to the private sector. Research in teacher selection suggests that discrimination takes place during the selection process, particularly, the screening and interview phases (Johnson, 1976; Young & Allison, 1982; Young & McMurry, 1986). Johnson (1976) conducted the first published study that showed possible age discrimination in teacher selection. He investigated relationships between teacher applicants' age and selection decisions. Results indicate principals and administrators prefer younger applicants to older applicants. Young & Allison (1982) investigated the effect of applicant age and teaching experience on selection. Teaching experience was varied by years; none, 3 years, and 8 years, and two ages (29 years and 49 years) of hypothetical applicants were manipulated. Results showed that regardless of years of teaching experiences, school principals and superintendents tended to select younger applicants. In succeeding studies, Young, in collaboration with other investigators, expanded the scope of his studies, including factors such as specific focal positions, professional qualifications, gender, and level of applicant skill obsolescence (Young & McMurry, 1986).Results show that age of the applicants, either alone or in combination with other factors, influenced rating scores during screening. The older applicants were rated lower than the younger applicants. Studies have focused on age as a factor in selection decisions, but not on reasons why age could be a factor.

Other research streams have attempted to determine what underlying influences affect teacher selection decision processes. In the literature, two theoretical models; (1) social distance theory and (2) attraction-similarity paradigm, have contributed to the studies in the selection process. Social distance theory, first put forth by Bogardus (1925, 1967), attempts to explain interpersonal relations from a cultural perspective. Social distance is based on the levels of comfort members of a culture experience relative to outsiders and is determined by various factors, such as race, religion, nationality, occupation, gender, educational level, etc (Bogardus, 1925; Triandis & Triandis, 1967).

The social distance theory suggests that people work more comfortably with co-workers when they perceive their social distance to be short (Rand & Wexley, 1975; Reis, 1996). Social distance characteristics within cultures or organizations have been shown to create stereotypes related to specific factors such as age or gender. A stereotype creates perceptions that influence the way people evaluate, react, and interact with others. An age stereotype perception can lead to discrimination when people make a decision about older people, not based on individual capabilities (Singer, 1986).

Another theory applying to selection research is the Attraction-Similarity Paradigm, developed by Byrne (1971), to explain interpersonal dynamics within organizations. This paradigm suggests that people who share common characteristics tend to be attracted to or perceive themselves to be similar to each other. Four characteristics influence interpersonal attraction and evaluation. These include: (1) need for affiliation, (2) overt physical characteristics, (3) propinquity (opportunity for close physical proximity), and (4) reciprocal reward and punishment (positive or negative aspects of a relationship-similarity or dissimilarity). Particularly, reciprocal reward (similarity) and punishment (dissimilarity) have a great impact on selection decisions (Rand & Wexley, 1975).

Several studies have investigated the influence of perceived similarity between supervisors and subordinates on characteristics, including competence, overall performance, support, judgment, and quality and number of suggestions. Results suggest that those supervisor-subordinate pairs that perceive themselves to be similar to each other rate each other higher on the factors being studied than do the pairs who perceive themselves as being dissimilar (Pulakos & Wexley, 1983). Studies in teacher selection have shown also that perceived similarity influences selection decisions between teacher applicants and evaluators, such as school principal and superintendents (Young & Joseph, 1989). These studies have had mixed results, with similarity affecting decisions in some studies, but not others. As the positive and negative perceptions about an applicant manifest themselves, through information in an application, resume, and interview, a decision-maker will discern similarity or dissimilarity with the applicant. This may have an effect on the ultimate selection decision.

Methodology

The sample for this study consisted of public elementary school principals of specific ages (39 and 59 years of age), from a midwestern state. Specific principal ages were used to amplify similarity and dissimilarity between applicant and evaluator ages, in keeping with the study's theoretical framework. Of the calculated sample size of 66 principals, determined through a power analysis, 47 useable sets of data (71 %) were obtained. Independent variables in the study are Applicant Age and Evaluator (Principal) Age. Applicant Age is manipulated at 3 levels: 39 years, 59 years, and a "No Age" Control. Evaluator (Principal) Age is set at two levels: 39 years and 59 years. This combination provides for a 3 X 2, fully-crossed factorial design.

Dependent variables are the probability of the applicant receiving an interview (10-point Likert-type scale) and the summation of responses related to 5 areas of teaching knowledge and abilities (4-point Likert-type scales). These included: (1) communication skills, (2) potential overall contribution to the school, (3) disciplinary ability, (4) potential for creating a friendly classroom atmosphere, and (5) professional growth potential (Stallard, 1990; Young & Allison, 1982; Young & Joseph, 1989). The study instruments consist of: (1) a hypothetical elementary teacher position description, based on an actual description, (2) a hypothetical applicant resume, based on an actual documents, and the Applicant Evaluation Form, adapted from studies by Young, et al. (1982, 1989).

A pilot study was conducted to assess the reliability of the Applicant Evaluation Form (Cronbach's Alpha = .86) and to check the manipulation of applicant ages on the resumes (Chi-square = 69.89, df = 2, $p < .01$). Subject packets were randomized so that a principal could receive a resume, with one of three applicant ages, relative to their own age: (1) same age, (2) different age, and (3) no age indicated. Subjects were asked to review the position description and the hypothetical applicant resume and to evaluate the applicant on the Applicant Evaluation Sheet. Follow-up calls and a mailing were made to minimize non-response.

Results

Descriptive statistics for the participating principals are shown in Table 1. The elementary school principals have significant teaching and administrative experience and of these principals, 45 out of 47 stated they used resumes as part of their formal selection processes.

Table 1
Subject Descriptive Statistics

Variable	N	Mean	SD	Range
Teaching Experience (Years)	47	16.93	9.63	4-38
Administrative Experience (Years)	47	10.05	7.44	1-34
Current School	47	485.98	190.71	150-1260
Total Males	25			
Total Females	22			

Results of the univariate analyses of variance and the multivariate analysis of co-variance performed on the study data, are shown in Table 2. To compensate for unequal cell sizes, the General Linear Model was used for data analysis, at the $\alpha = .05$ level. As a result of the experimental manipulations and subsequent analyses, all of the study hypotheses, *as stated*, were rejected at the Alpha = .05 level. However, a significant main effect was detected for Evaluator Age. In terms of practical significance of the result, Evaluator age was found to account for 16% of the variance in the summated score for teaching knowledge and abilities.

Table 2.
Analysis of Covariance Results.

Source	Specific measures of Teacher KSAs			Interview Probability			Multivariate Analysis
	MS	DF	F	MS	DF	F	F
Evaluator Age (A)	35.53	1	5.35*	5.55	1	.97	3.64*
Applicant Age (B)	11.97	2	2.79	14.58	2	2.53	1.54
Mailing (Covariate)	8.24	1	1.24	12.29	1	2.13	1.04
A*B	1.50	2	.59	4.17	2	.72	1.22
Error	6.65	40		5.77	40		
Total		46			46		

N = 47, * $p < .05$ Evaluator Age – $Eta^2 = .16$ (16%)

This study is of limited scope, using age as a single factor, relative to selection discrimination. Results indicate that the age of the school principal influences screening decisions. A significant main effect was found at the multivariate analysis level for Evaluator (principal) Age, in terms of measures of applicants' teaching knowledge and abilities. Younger principals rated applicants lower on this dependent variable than did older principals, regardless of the age of the applicant. No significant main effect was found relative to probability of an applicant receiving an interview. Based on these results, none of the hypotheses, as stated, were supported; age discrimination was not observed in the study. However, further analyses shows that, in comparing younger versus older principals in terms of ratings on measures of teaching knowledge and abilities, for younger and older applicants, principals of both ages rated younger applicants higher than older applicants. These findings show that age discrimination *could possibly* occur during the screening phase. This implies that stereotype perceptions that may be held by the elementary school principals might interfere with the screening decisions. To answer this question, future inquiry is necessary.

The nature of the main effect indicates a significant relationship between Evaluator Age and taking consideration of applicants' professional credentials (teaching knowledge and abilities). Younger principals tend to give less consideration to the professional credentials of both younger and older applicants, preferring, instead, to rely more on the interview. Castetter and Young (2000) provide a caution that selection is often seen as a single event, mostly the interview. If the interview is valid to select the best person for the job, nothing more need be said. However, studies have already shown that discrimination is most likely to occur during both the screening and interview phases of the selection process (Reis, 1996; Young & McMurry, 1986). These results suggest that younger principals should take more consideration of job-related information from applicants during screening and should prepare interviews based on job-related information and professional credentials.

Implications to HRD Issues

The results of this study raise critical issues relative to selection behavior of school principals at the screening and interview phases of the selection system, where selection decisions are most likely to be interfered with by age discrimination. In this regard, the performance improvement of school principals and the selection system is critical to bring a high quality of education into a school. To improve performance, Swanson (1996) states that performance diagnosis, a systematic method to identify a workplace problem and the desirable performance at three levels of performance: organization, process, and individual, is the first step in a performance improvement process. By applying this concept, performance improvement in teacher selection, for elementary school principals, can be provided at the screening phase of the selection process. This section focuses on providing critical performance factors that can help school principals diagnose their performance during the teacher selection process. The performance diagnosis process in this paper involves four phases: (1) articulating an initial purpose, (2) assessing performance variables, (3) performance measures, and (4) performance needs.

Initial Purpose

An initial purpose of performance improvement, for teacher selection during the screening phase, can be identified through examination of problem indicators, types of performance issues, and the target level of performance. Indicators of performance problems include a lack of independence between recruitment and selection, relationships with the board of education and the teacher 's unions, a lack of resources (selection tools and administrative assistance), inconsistencies between job descriptions and position requirements, and misapplication or non-application of selection techniques (Castetter & Young, 2000). Based on these indices, principals should be able to classify performance issues into (1) present problems, (2) improvement, and (3) future requirements, to be examined. The ultimate goal is the improvement of the quality of education in a school; therefore, a performance issue in teacher selection, for school principals, can be classified as improvement. This type of performance issue requires an internal expert, with cooperative efforts. The performance indicators discussed previously involve the three levels of performance: organization (school), process (selection), and individual (principal). However, considering that responsibilities in teacher selection (the entire process and decisions made) require principals to have high competencies and KSAs, and that they are also involved in establishing employment policies and school missions/goals, targeting the individual level (principals) of performance improvement is inevitable for the improvement of teacher selection.

Performance Variables

To assess performance at the screening phase for individual principals, performance variables in Table 3 provide a broad perspective in diagnosing performance. By examining these variables, the principals can identify and understand performance problems and interrelationships among categories at organizational and process levels.

Table 3. Performance Diagnosis Matrix for Teacher Selection Variables

	Organizational Level	Process Level	Individual Level
Mission/ Goal	Fits between Mission/ goals of school and selection.	Goals of selection processes allow principals to attain organizational and their missions/goals.	Congruence between professional mission/ goals and those of individual principals.
Systems Design	Structure and employment policies support desired performance.	A systematic and rational selection process operated independently from other systems.	Roles and responsibilities in selection support principals to achieve their desirable performance.
Capacity	Leadership, funds, culture of the community and the school, and legal requirements to select highly qualified applicants.	The selection process contains all critical factors, such as criteria, timeliness, tools, and administrative resources.	The individual principal's mental, physical, and emotional capacities to carry out tasks in selection.
Motivation	Employment policies (reward systems) foster desirable performance.	All necessary required teacher applicants' information, such as references, an application form, certifications, etc..	Motivation to attain high performance and desire to select qualified personnel into a school.
Expertise	Establishing personnel planning and personnel development programs.	Expertise development and its process responding to any change in selection (legal & position requirements, external labor market, etc.).	KSAs, experience, and competencies of individual principals. Knowledge of teaching positions in the school.

Performance Measures

According to Swanson (1996), specifying performance measures by identifying the related output units of performance at organizational, process, and individual levels, is imperative to change to improve performance. This phase involves three stages: (1) identifying outputs for performance levels, such as the number of highly qualified teacher applicants (school), adequate applicant information and data collected (process), and screening decisions for future interviews (principals). Actual units of performance measures can be the following: (a) time (how soon a position needs to be filled), (b) quantity (how many applicants applied for each vacant teaching position and different types of selection tools available), and (c) quality (highly-qualified applicants, reliable information from applicants, and principal's competencies and KSAs in selection).

Performance Needs

Determining performance needs helps specify needs and interventions for performance improvement, relative to organizational, process, and individual levels. The taxonomy of performance lays in two categories: maintaining the system and changing the system. The results of this study have already shown that quality education in a school can be a function of the ability to identify and select higher performers by individual school principals, through the selection process. The selection process is considered as a series of decisions (Castetter & Young, 2000), and these decisions should be based on teaching credentials and legal requirements. However, school principals sometimes take less consideration of applicants' teaching credentials and are influenced by age-related perceptions, which is implied in this study. However, school principals' decision-making behaviors should be improved to bring quality education into their schools. In these respects, changing the system to advance school principals' competencies and KSAs, as well as improving the selection method, process, and system to a better state or quality would best fit the purpose of this study.

Contribution to HRD Issues in Performance Improvement

Diagnosing school principals' performance has been discussed in this paper, based on a research study in teacher selection and age discrimination. This section summarizes issues in performance improvement for school principals. The diagnosis of performance improvement model contains the four phases: (1) the purpose, (2) performance needs, (3) performance variables, and (4) measuring performance, and each phase has provided particular elements for improvement. School principals have the most difficult position in a school, when solutions to issues rely on their performance improvement, because they are at the top of the organization. Even though numerous studies have focused on teacher applicants, selection methods and processes, there has not been adequate investigation of selection behaviors, specifying school principals. In this regard, this paper is considered to be a challenging study, which provides some insights into performance technologies.

Based on HRD issues discussed through this study, using information from the diagnosis phase should assist elementary school principals in understanding elements for performance improvement. In addition, performance technologists can identify types of interventions to solve performance problems at the organizational (school), process (selection), and individual (principal) levels. However, the results of this study specify general selection behaviors among school principals. In other words, it is difficult to assess actual numbers for performance improvement by applying the diagnosis model to only one small set of data. Therefore, the study focuses exclusively on identifying performance factors for principals and discusses them in the selection context. More importantly, as mentioned previously, this study contributes to expand the domain of HRD issues and performance improvement, specifically in relation to school organizations and school principals with their decision behaviors.

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Partnership Research: Ensuring More Useful HRD Collaborations

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This paper addresses the question of how to bring HRD research closer to practice through partnership research. It is argued that most HRD research has limited impact on practice because research problems are usually generated devoid of a practice context, which is a clearly undesirable situation. The paper presents the need for partnership research, a process for doing partnership research, examples of partnership research studies, and issues in doing partnership research.

Keywords: Research, Partnership, Collaboration

This paper focuses on making HRD collaborations between researchers and practitioners more useful through partnership research. Usefulness here means that the collaboration achieved the dual goals of addressing both an immediate organizational problem and extending the bodies of knowledge that support the HRD field. From this perspective, partnership research has importance to all segments of the HRD community, but it has particular importance to those HRD researchers and reflective practitioners who seek to work together to help improve practice, which is the ultimate test of the research. Simply put, effective practice depends on rigorous research. Partnership research is defined as the process of improving HRD practice through research (Jacobs, 1996; 1997). Numerous studies have been reported in the literature that can be classified as being examples of partnership research, including Jacobs and Moore (1998), Jacobs, Jones, and Neil (1992), Jacobs and McGiffin, (1987), among others. However, partnership research remains an emerging concept in the HRD field.

This paper has four major purposes: 1) discuss the need for considering partnership research, 2) describe a process for doing partnership research, 3) discuss examples of partnership research projects, and, 4) discuss issues related to doing partnership research.

The Need for Partnership Research

HRD research is now close to its limits in terms of influencing practice. In spite of increased research activity in the field, few advances in practice have been grounded in research. Previous authors have generally sought to address this issue by emphasizing the importance of integrating HRD research and practice (Leimbach & Baldwin, 1997) and reminding us of the need to have practice become more theory-based (Swanson, 1996), information which was clearly needed at the time. Yet, there is a lack of specific guidance on how to change the present situation. To some observers, the issue is not whether there are sufficient numbers of collaborations between HRD researchers and practitioners. Indeed, many examples of such collaborations can be found both those reported in the HRD literature and those described by HRD graduate programs. Rather, the issue focuses on the nature of most HRD collaborations. That is, merely having researchers and practitioners work together on projects does not necessarily ensure that both scholarly and practical contributions will result from the effort. As such, there is a need to consider alternate approaches to HRD collaborations.

As stated, partnership research seeks to improve practice through research. Underlying partnership research is the principle that practice will be enhanced when it is based on rigorous research. But, that research should be linked back to the practice. Thus, the present research-to-practice model seems largely inadequate and incomplete. Under this approach, too much research, especially dissertation research, is conducted devoid of a practice context at the beginning. The data may have been gathered in an organizational setting, but the research has little or no meaning back to that organization. The organization often exists as a matter of convenience to gather the data, not as an equal partner in the process. Instead, partnership research suggests a practice-to research-to practice model. The research comes from practice, and the results are directed back to practice. To be clear, partnership research is not about any particular form of research, such as the paradigm, theory, or methods used. Nor is partnership research meant to supplant action research as a means to guide on-going practice. Rather, partnership research suggests that HRD practice should play a more prominent role in determining HRD research problems. In partnership research, HRD practice becomes antecedent to research, whereupon research problems are drawn from

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issues that arise in the practice setting, based on the interests of the researcher and, of course, on the needs of the organization. As a result, partnership research suggests shifting the emphasis for identifying research problems.

The literature on research in adult education and human resource development suggests that several sources of information might be used to identify research problems. Unfortunately, none of the references emphasize the one source of information that influences research the most, and becomes the ultimate recipient of the research, namely practice. For example, Merriam and Simpson (1995) include practice as one source of information in their discussions, but they give it no special treatment relative to the other sources. The point here is that practice should be viewed as the major source of information for identifying HRD research problems, such that practice becomes part of the research process. This may be true whether the HRD researcher is actually involved in the practice or is observing the practice firsthand. Unless the research problem is grounded more from practice at the onset, the research will unlikely have much relevance to the practice in the long run.

Partnership Research Process

Table 1 presents the various steps of the proposed partnership research process. The process assumes that researchers and practitioners come together, at least initially, to serve the practitioner's organization in some way. This assumption provides the practice context from which research problems can be subsequently identified. The process also assumes that each partner should have a stake in the outcomes of the collaboration, even as the outcomes change over the course of the collaboration.

Table 1. Partnership Research Process

1. HRD researcher seeks-out practitioner partners to meet academic, scholarly, and professional development goals. HRD practitioner seeks-out researcher partners to meet their organization's needs.
2. Contract negotiated to determine the outcomes of the HRD collaboration, including a statement that suggests the possibility of doing research as part of the collaboration.
3. Project context analyzed continuously to identify potential research problems, based on interests of the researchers and the perceived needs of the organization.
4. Value of the research problem confirmed through discussions with client and subsequent review of scholarly literature.
5. Contract renegotiated to include research as a committed activity of the collaboration, including a listing of expectations and outcomes of both researcher and practitioner.
6. Results disseminated based on contract expectations, such as: presentations to management, summary memos, manuscripts for publication, or dissertations.
7. Implications of the research are synthesized and its usefulness determined for the organization and for the field as a whole.

The process shows that HRD researchers and practitioners have different reasons for wanting to engage in collaborations. Clearly, anyone who has attempted to do R&D in organizational settings knows this statement to be true. Indeed, the underlying goal of most HRD researchers is to generate information that adds to, disputes, or in some way contributes to HRD theory and practice. That is, the goal is to identify principles that apply to similar instances of HRD practice, such as, say, finding out the critical factors to consider when designing organizational mentoring programs. At the same time, the practitioner's goal is to generate information that helps solve an immediate problem or brings additional insight onto an issue, which enables someone to make a decision.

From the initial contacts, a contract is usually negotiated specifying the nature of the collaboration. In reality, few HRD collaborations ever start out as a research project from the beginning. However, the possibility of doing

research later on -- under certain mutually agreeable conditions – should be specified in the contract. Perhaps the most difficult aspect of the process is the step whereby the researcher continuously looks out for research opportunities and generates research problems from the opportunities. How to extrapolate a research problem from a practice context remains somewhat subjective, since researchers will likely look for different cues, based on their own scholarly interests. The research problem should be confirmed with the practitioner, since the practitioner should value the results as much as the researcher. In other words, the practitioner should know at the beginning the planned use of the results.

In the best case, the dissemination of the results should be a shared activity. That is, the researcher and practitioner should each support each other in accomplishing their outcomes. Yet, perhaps the most crucial step in the partnership research process is the final one, in which the implications of the research are derived for the benefit of practice. For the researcher, the challenge becomes how to translate the results of one study, or a series of similar studies, into useable principles for practice. For the practitioner, the challenge becomes how to change present practice in response to the research. Case studies have been helpful tools in both instances.

In truth, the proposed process represents a synthesis of the author's own experiences in developing HRD collaborations, not necessarily the ones that all researchers will experience. As a result, parts of the process will likely differ as collaboration opportunities differ.

Examples of Partnership Research

To be certain, no generally accepted criteria exist for identifying partnership research. Thus, following five criteria were drawn from the partnership research process, including: 1) the research study emerged from an on-going HRD collaboration; 2) both partners in the collaboration perceived the research problem to have value when the research was proposed; 3) the research was conducted parallel to the other activities of the collaboration; 4) both partners achieved at least some of their expected outcomes for the research; and, 5) attempts have been made to move the results from the immediate setting. Table 2 summarizes five case studies that have been determined to meet these criteria.

In truth, not all the examples meet the five criteria to the same extent. However, the purpose of presenting the examples is to show the range and nature of potential research projects.

Issues for Doing Partnership Research

Clearly, doing partnership research adds another level of complexity to an already difficult process, namely the research process. Yet, if the HRD field is to continue to provide benefits to organizations and individuals as promised, then research must have greater influence on practice. And partnership research seems instrumental for achieving that goal. Thus, the added difficulty caused by partnership research seems unavoidable.

Five issues seem important to discuss related to doing partnership research. First, there is the observation that not all attempts at partnership research are successful. Indeed, partnership research is not always successful, even when both partners make all efforts otherwise. At one level, success depends on the level of trust and respect between the partners. Even so, there is always the possibility that a suitable research study simply cannot be found within the practice context. Certainly, HRD collaborations cannot be judged in terms of their research productivity alone. But, there is no doubt that partnership research involves greater risk, especially for the HRD researcher who is investing resources with that promise in mind.

Second, there is the need for researchers to be more careful in selecting their practitioner partners. In a sense, good HRD collaborations may occur when the practitioner knows something about research. Those practitioner who have virtually no experience with research may not be a good choice in all instances. In fact, some inexperienced practitioners may agree to become involved in research, but in fact have little knowledge and the imposition this may make on their organizations. Third, as noted, the most difficult part of the partnership research process is extrapolating research problems from the practice context. Some HRD researchers apparently have skills to do this with some degree of success. However, the skill has not yet been systematically analyzed, assuming that the skill can be successfully analyzed, and then taught to others, perhaps during graduate courses in research. At best, extrapolating research from practice remains a worth notion, with uncertain behavioral components.

Fourth, there is the issue of maintaining the commitment to the other partner's outcomes, even when one set of outcomes has been accomplished. As stated, partnership research assumes that effective practice depends on

rigorous research. Yet, it is the fulfillment of the outcomes that ultimately gives partnership research its potential power to influence practice. If the respective outcomes are not achieved for each partner, then the collaboration cannot be judged as a success. In truth, however, there is the natural tendency for one partner or the other to leave the collaboration prematurely.

Finally, there is the issue of the proper relationship between researchers and practice. It is suggested that HRD researchers know practice better or at least seek to become more accomplished practitioners themselves if they are not already. Paradoxically, if HRD researchers are not effective as practitioners, then it is possible that their own research opportunities will be affected detrimentally. In effect, HRD researchers must view their own research agenda as being linked with the various practice opportunities that they take on. Research agendas may be influenced and guided by practice, as much as practice influences and guides research.

Conclusion

This paper introduces partnership research as a point of discussion among HRD researchers. The need to consider partnership research is based on the need to have research and practice become more dependent upon each other. Merely encouraging groups of researchers and practitioners to recognize this need does not seem sufficient for change. Partnership research represents an approach to that alters how researchers and practitioners collaborate together, for the broader purpose of improving the contributions of the HRD field as a whole.

Table 2. Partnership Research Examples

Organization	*Purpose of Collaboration*	*Organization Question*	*Research Problem*	*Outcomes*
International Recruiting Organization	Evaluate distance training program	Which version is more effective for training newly-hired recruitment specialists?	What is the relationship between the two training versions system and performance?	• Dissertation • Research funding • Evaluation report
Kenworth Truck Company	Design and implement structured OJT system	How do we justify the cost of using structured OJT?	What are the financial benefits of unstructured and structured OJT?	• Report • Presentation • Policy change • *HRDQ* article • Research agenda
Thomson Electronics	Help design new-hire selection process	Is the process valid?	Compare the effectiveness of two selection approaches: group vs. individual?	• Report • AHRD paper • Manuscript submitted
Huntington National Bank	Analyze existing data from commercial culture survey	What other results can be found in the survey?	Does involvement in employee development programs differ across managers?	• Management review • AHRD paper • Dissertation • *HRDQ* Forum article
Delphi Systems	Help implement self-managed work groups	How to become more competitive?	Is there a valid process for identifying the development needs of frontline employees?	• Change policy • Presentation • Book chapter

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A Discussion of the Methodological Appropriateness of Research Represented in the AHRD Proceedings - A Strategic Perspective For Journey Management

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The intent of this meta - study was to examine the methodological appropriateness of the types of research represented in the 1997 and 1998 AHRD Proceedings. It was intended to provoke thought and debate in regard to the strategic needs of HRD and could be useful in a reflective critique of ourselves, our institutions, our body of knowledge, and where we are going (journey management).

Keywords: Research Methods, Meta-Study, Strategic

Theoretical Framework and Expectations

Toward contributing to the academy's mission of *leading HRD through research*, the intent of this descriptive study was to examine the types of research as represented in the 1997 and 1998 AHRD Proceedings and the implications to the field from a strategic perspective. By presenting this analysis at the conference, I hope to provoke a scholarly debate, discussion, and dialogue as to the relative merits and appropriateness of the alignment with the general needs of the field. Additionally, to help frame the results of this study I constructed a general life cycle meta-research model collectively derived from Kerlinger (1986), Isaac & Michael (1990), Best & Kahn (1989), and Nunnally & Bernstein (1994). I used this strategic level construct for my assessment and evaluation of the results of this study (Figure 1).

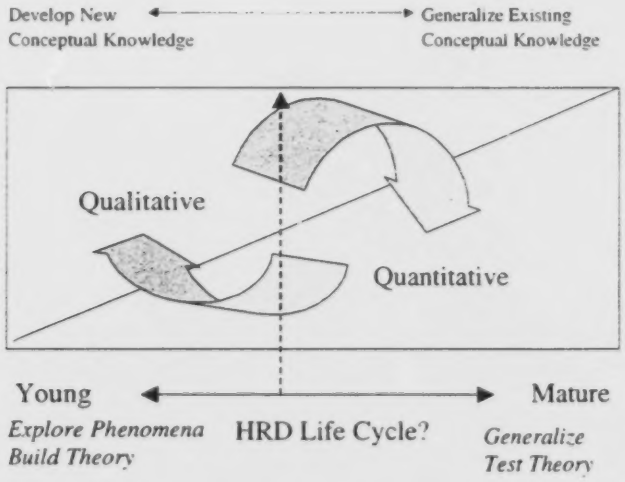

Figure 1. HRD Research Assessment and Life Cycle Model.

Research is a process of reflective inquiry; its components, *qualitative and quantitative*, are not mutually exclusive but can be viewed as inter-dependent (Best & Kahn, 1989 and Kerlinger, 1986). For example, qualitative research methods are helpful in developing new conceptual theory and better understanding the relevant aspects of

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the social realities involved; quantitative methods can then be used to test and generalize this conceptualized theory, but the generalized results can in turn drive the need for further development of theory which to be employed must again be tested. This qualitative/quantitative linkage portrays one aspect of their interactivity and inter-dependency. Additionally, hybrid designs (utilizing the strengths of both types) can supplement and compliment the strength of design and the general robustness of the findings. But even in a hybrid study, ultimate usefulness is dependent on the comparative relationships (or lack) of the results, the researcher's conclusions, and its contribution to the body of knowledge. To fulfill the complete needs of a field, one must develop theory and test (evaluate, validate, and generalize) theory. Though not exclusively so, qualitative and quantitative research designs generally tend, due to their relative strengths and weaknesses, to functionally align their general utilities to theory and test, respectively. We need them both to complete a line of research.

But if one takes a strategic view of the proportional amount each method is being applied across our field and their aggregate, methodological appropriateness, a useful benchmark is the relative maturity of HRD as a discipline. In this regard, a mature field of study and practice with well established theoretical bases would tend to generate an aggregate balance of both types of research or maybe even an over-representation of quantitative studies to help test, evaluate, and generalize established theory linking it to practice. On the other hand a relatively young discipline, as psychology was in the early 1900's, would probably expend the majority of its collective energy developing a body of theory. If HRD is considered a fairly new discipline, I would expect to find more qualitative than quantitative methods being used in a general survey of the field. However, if I accept Gilley & Eggland's (1989) assessment and characterization of HRD as an emerging forty year old multi- discipline, I would place HRD somewhere in the early middle of figure 1 above and its depiction of HRD's relative life cycle. As such, I would expect a relative balance of the types of research methods depicted on the model.

I could go on to posit that even if considered a relatively new field, many of HRD's theoretical frameworks have strong and pronounced historical and/or parallel threads from other disciplines. As a result, much of HRD's theoretical bases are derived. (Figure 2).

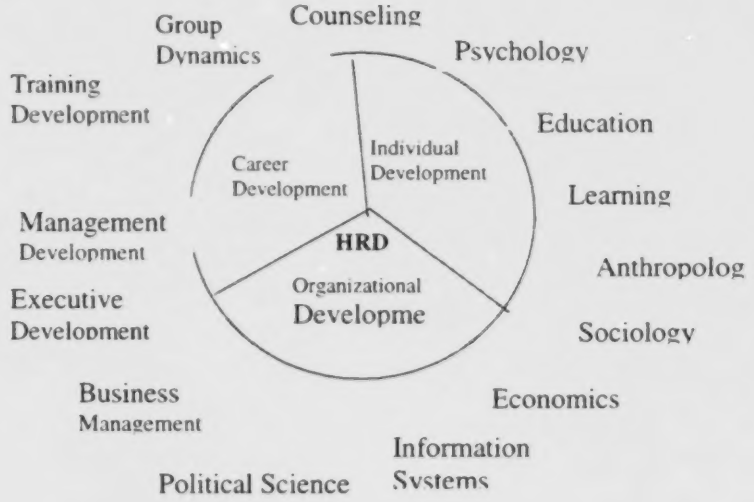


Figure 2 HRD's historical and parallel threads.

But from a maturation perspective, many recent HRD theories are not new, but only new within the context of considering the human capital issues driven by new business and learning challenges brought about by the information age with its profound implications on our societal and business processes and systems. The same wine (s), different bottle and label (and perhaps different combinations, distillations and consumptions). However, HRD still can be viewed as unique -- due to the integration of these threads into the fabric of our theories and practice.

In order to make a value judgement (for this study) as to relative appropriateness to the field, the articles published in the 1997 and 1998 AHRD Proceedings were categorized demographically and by general method of research. I believe that these articles are representative of and reflect the relative currency of thought and research being generated by our institutions, organizations, students, faculty, and practitioner. Previously, others have attempted to explore the typography of research appearing in earlier AHRD proceedings measuring the appropriateness to the needs of the field. Arnold (1996) conducted an earlier study of the 1994 and 1995 Proceedings and found a majority were descriptive in nature. As a follow-on supplement, van Hooff and Mulder (1997) continued the intent, but deviated in focus using research formats instead of methods for categories for the year 1996. However, both of these earlier studies did recommend additional longitudinal research should continue in the assessment of the methodological appropriateness of the types of research being generated by the Academy (Arnold, 1996; van Hooff & Mulder, 1997). My current study adds to their efforts, but more deliberately focuses upon the broad generalizations of *qualitative and quantitative* as a scale of methodological appropriateness in comparison with the longitudinal needs of HRD. These general categories, qualitative and quantitative depicted in figure 3 below, I found could be used to estimate the possible relationships between the relative life cycle of a discipline and the products of its endeavors. Though precise conclusions are not argued (nor advocated), this life cycle framework could be useful in a critique of ourselves, our institutions, our body of knowledge, and where we are going (journey management). *Finally I believe that, from a strategic perspective, the how determines the what or the* methodological appropriateness helps define and is irrevocably linked to the results.

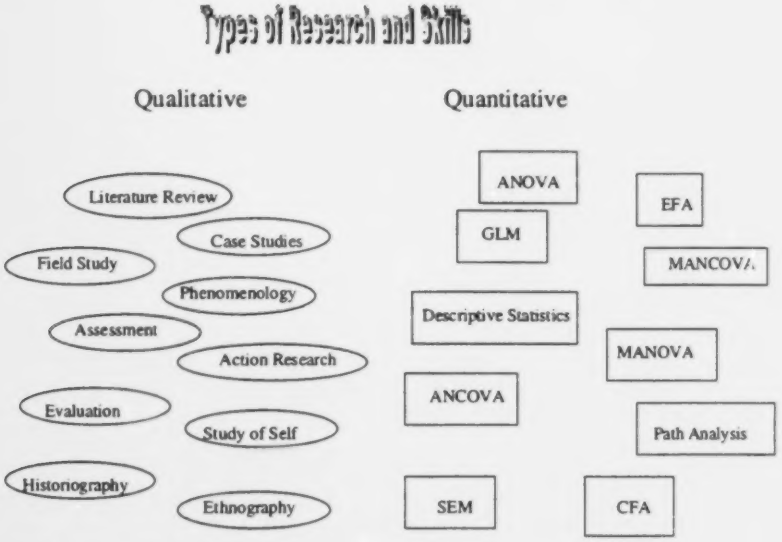


Figure 3. Types of research and skills.

Questions For Investigation

This study focused on the type(s) of research as characterized and grouped above and represented in recent (1997 and 1998) conference proceedings. From a strategic perspective, it questioned the proportional methodological appropriateness. The following research questions provoked this study:

1. Is the distribution of the types of research represented in the AHRD adequate and appropriate for our strategic needs?
2. If these results of this study can be generalized, what are the implications to the future of HRD as a body of knowledge and practice?

Method

Though Arnold (1996) analyzed 1994 and 1995 data, I felt that the last two years of research papers published in the proceeding would be a more stable and valid sample from which to base further inquiry and dialogue. As a early member of the AHRD, I have witnessed a marked improvement in the quality and the scholarship in the proceedings. Because of this apparent positive trend, I felt more comfortable with the representativeness of the data for 1997 and 1998. However, van Hooff & Mulder's (1997) results (123 papers) derived from the 1996 proceedings were useful for comparison.

Sample and Design. I examined and analyzed 241 papers - samples of 117 from the 1997 and 124 from the 1998 AHRD proceedings. Additionally, I compared results from van Hooff and Mulder (1997) derived from an additional 123 papers - totaling 364 representing the last three years.

Data (paper) categorization. The overarching categories of Qualitative and Quantitative were used to define and describe types of research. Figure 3 above depicts the relative groupings of research characteristics and methods comprising the two general categories. Papers were reviewed and sorted by research categories and selected demographics. Analyses were conducted using constructed visual representations of the relative distributions and descriptive statistics. The following target variables (Figure 4) were used in data collection and subsequent analyses:

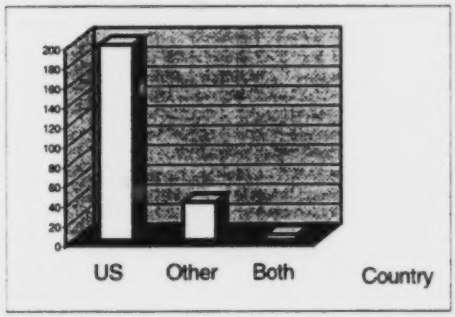
- Gender:	Female or Male or Both (Team)
- Sponsoring Agency:	Academic or Industry or Both
- Intended Focus Area:	Theory or Practice
- Country:	US or International or Both
- Type of Research:	Qualitative, Quantitative, Both, Multivariate

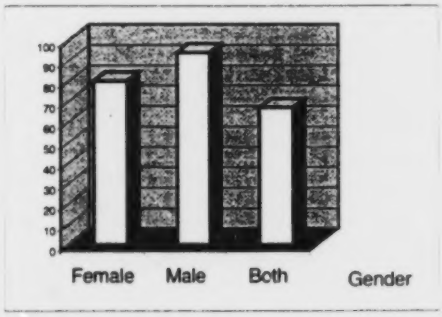
Figure 4. Research variables. Multivariate research papers were submitted by only 5 institutions represented at the AHRD.

Coding and Distributions. When apparent variable codings were determined as proclaimed within the research design of the majority of the papers. It should be noted however that I liberally coded quantitative or both when observing any quantification in the papers. A coding of multivariate research was more stringently awarded consistent with Tabachnick and Fidell (1989). Demographics of gender were determined by gender apparent first name (this procedure could of course create some error in the gender specific results). Other categories of research focus and national representation were also somewhat subjective judgements. Sponsoring agency category, academic or industry , was coded as stated in the individual paper reviewed. Frequency distributions were used.

Results

Results were graphically compared to the constructed life cycle research model. The 1997 – 1998 proceedings





yielded the following distributions in figures 5, 6, and 7.

Figure 5. Country and gender demographics. Most of the papers were predominantly from the United States, some 196 vs. 38 from other countries. The break out by gender was relatively balanced (80 Female, 94 male, and 67 both).

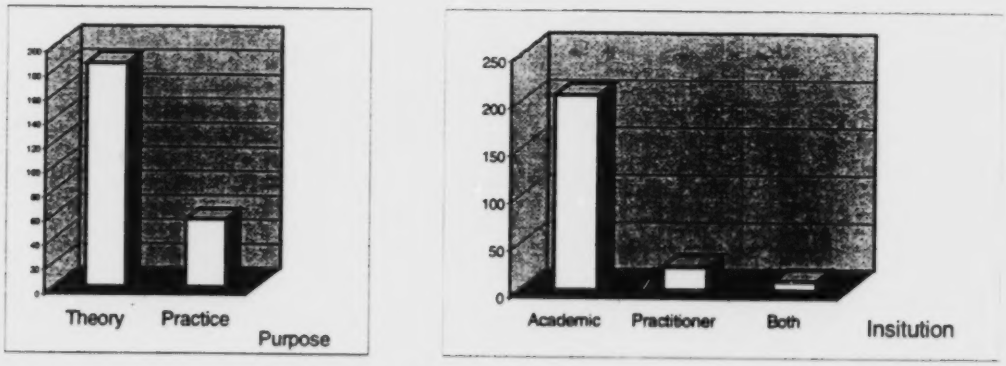


Figure 6. Research purpose and represented institution.

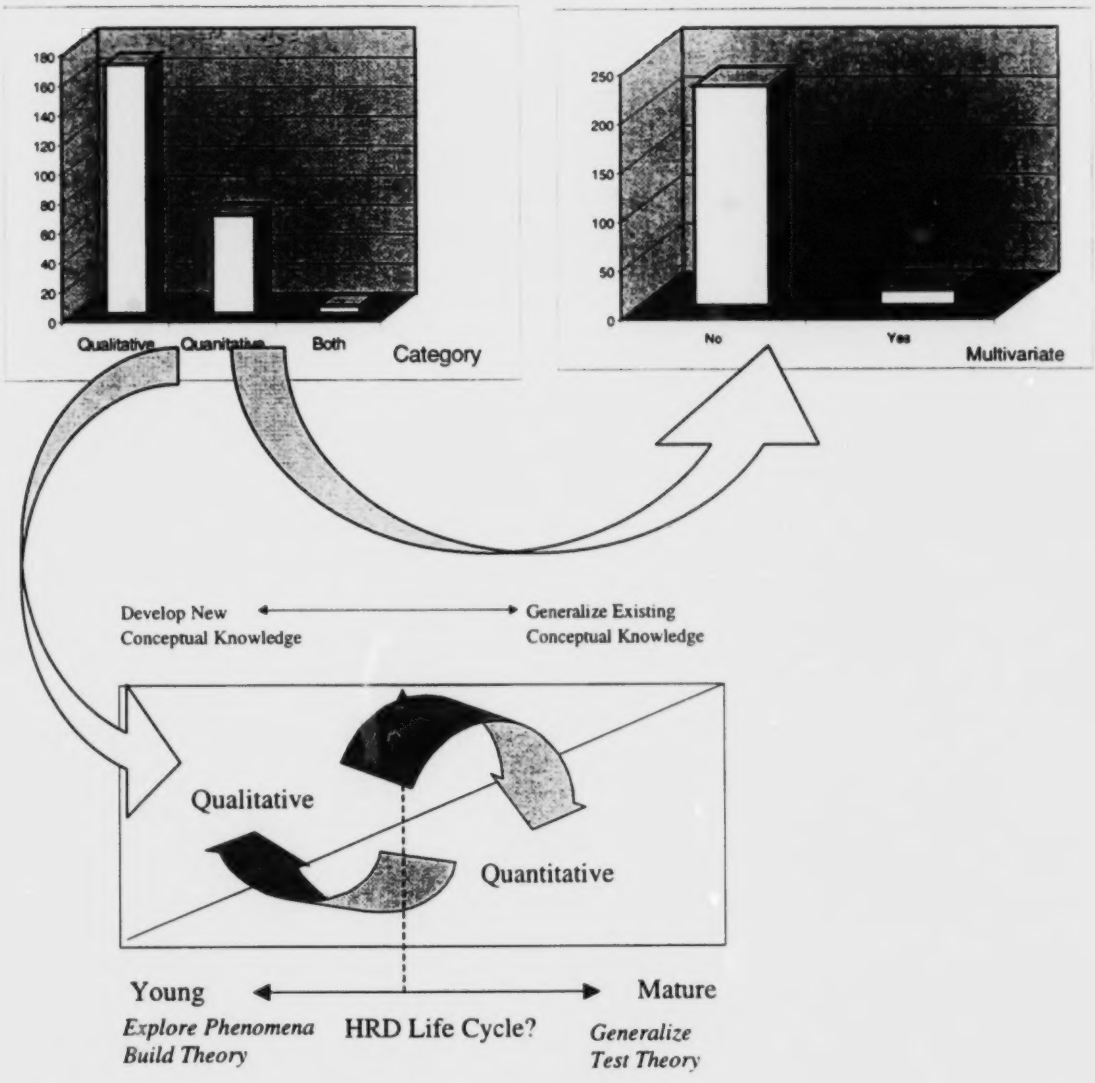


Figure 7. Results In regard to types of research.

The majority of the papers above were qualitative (169 versus 67 quantitative). Of the 241 total and 67 quantitative, only 16 were multivariate in design.

The orientation of most of the Papers focused more on theory than practice (185 theory and 56 practice). Institutions represented were academic verses industry/practitioner (206 to 25 - with 10 as partnerships between academia and industry).

Discussion In Regard to the Limitations of the Study, its Implications for Human Resource Development, and the Important Questions Remaining.

In this study (and in van Hooff & Mulder's, et. al.), there was a pronounced preference evident for qualitative methods of research. If these results reflect the research interests and products for our field, then an inordinate level of effort, resources, and investment are expended using qualitative methods. This could suggest that HRD needs to define itself and develop its theory and body of knowledge. This overrepresentation of qualitative methods could be interpreted as a fulfillment of the strategic need for intensive studies of background, current status, and environmental interactions of given social units, individuals, groups, institutions, or communities to better understand the social realities characterized by the emergence of a relatively new discipline (Issac & Michael, 1990; Kerlinger, 1986). Even if relatively new as some will argue (McLean, 1998) - though others will counter citing the abundant historic theoretical threads from education, psychology, organizational development, group dynamics, adult education, and business processes and management literatures, HRD as a forty year old discipline would benefit from a more balanced level of effort and research (Gilley & Eggland, 1989). More methodologically balanced research methods would allow for the generalization and operationalization of theory. Only then can we effectively deploy and link theory to practice (I would hope that we are not so much in our infancy that we need to continuously develop an endless stream of tentative hypotheses after tentative hypotheses for others to test at some future date). Additionally, advocating more quantitative research studies, especially multivariate analyses – *only 16 in two years of proceedings from five of our major institutions*, are methodological appropriate to push the field from theory to practice (and provoke subsequent follow-on inquiry - both qualitative and quantitative). We need both methods in abundance to address the full needs of HRD as a unique discipline.

Gary McLean, Editor for the HRDQ, indirectly summarized my own stance, though not deliberately, on this issue, "*Every academic field is marked by its literature*...the field of human resource development...has been well served with quality, practitioner-oriented journals an newsletters. The same can not be said of the scholarly or academic literature available to members to the profession"...he goes on to say that this situation is changing partly due to the publication of the HRDQ (McLean, 1998, p. 23-1). Strategically, an over-representation of either qualitative or quantitative methods (and the relative absence of multivariate methods) should raise a concern, unless the true needs of the field being targeted are based on some compelling rationale that demands the majority of our attention and efforts. The real question, not answered in this study but provoked by the overrepresentation of qualitative research methods used in the Proceedings, is why?

- ✓ Is HRD, as a young discipline, still lacking enough stable theoretical frameworks which would largely promote and require more qualitative developmental inquiries in a quest for definition?
- ✓ Are we still too early in our development as a discipline to generalize to the population and leverage our collective theoretical knowledge?
- ✓ Are we as a population of scholars and practitioners more interested in qualitative pursuits and generally adverse to statistics, quantification, and analytical methods?
- ✓ Do our research questions really drive our research methods or are there other reasons why HRD is overrepresented by qualitative research products and methods?
- ✓ Is there something in our cognitive style preference makeup that pre-determines our general bias toward more subjective vice analytic inquiry?
- ✓ Do we recruit faculty at our institutions with predominantly qualitative interests, backgrounds, and abilities... do we clone ourselves?
- ✓ Why do our graduate students gravitate within our programs to qualitative methods?

- ✓ Do our HRD faculty, graduate students and field practitioners have the requisite quantitative, multivariate research skills to fully test and evaluate theory?

- ✓ And finally, what individual and institutional strategies would be necessary to balance this alleged methodological inappropriateness?

Of course, the questions raised by this study are based on the assumption that the accepted papers within the 1997 and 1998 AHRD proceedings are representative in quantity and quality in regard to the distribution of research being conducted in the larger domain of HRD. However, the results of this study could provide useful insight for a brief reflective critique of our academy and the field in general, especially if viewed from a strategic perspective. If these distributions are truly representative of our field and interests when compared to the relative life cycle of HRD, it would be prudent to question the methodological appropriateness of the majority of our intellectual endeavors and investments. We must look at ourselves, our institutions, our policies, our faculties, interests and expertise, historical theoretical threads, and the relative needs of our body of knowledge – by seeking these answers we (the AHRD) may manage our journey.

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Theory in "Theory to Practice": Voices of Practitioners

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Theory-to-practice is a prominent issue that is certain to affect the future success of HRD. Although many are discussing the topic, it has yet to be studied in any systematic way. A critical step in progressing on this issue is to further understand practitioners' views on theory in their HRD work. The purpose of this study was to describe and understand the experience of HRD practitioners in applying theory to practice using a descriptive qualitative approach.

Keywords: Theory-to-Practice, Qualitative Research

Human Resource Development is an applied field. Therein lies one of its most beneficial strengths and its most haunting threat. The field is driven by its practice—the interventions that are being implemented throughout organizations today. However, practice has remained the driver even as HRD's theory-base increases. Today, practice is increasingly criticized for not using theory to improve its effectiveness and for, in turn, producing shoddy interventions, fads, and unsubstantiated psuedotheories (Swanson, 1997). On the other hand, practitioners continue to criticize scholars for being disconnected from their challenges, slow in producing theory, and misdirected in the issues they address.

This issue has been increasingly discussed in HRD during the past few years. In fact, it is noteworthy that *Human Resource Development Quarterly* had an editorial on the topic once during each of the last four years (Watkins, 1994; McLean, 1995; Jacobs, 1996; Swanson, 1997) and the topic took center stage at the 1997 Academy of Human Resource Development.

Although there are quite a few key people discussing the topic, the issue has yet to be studied in any systematic way. Those who are discussing it speak from their guts, informed opinions, and informal polls of their networks. While this is valuable, it does not constitute "formal inquiry that helps us to understand and explain the meaning" (Merriam, 1998, p. 5) of the phenomena of interest.

Research and practice must be linked to ensure a stronger foundation on which the field can strengthen and be more successful in achieving its goals. It is possible that HRD professionals need new models on which to build a solid research and practice partnership. Carr and Kemmis (1986) urge us to take a praxiological view of theory and practice—meaning that theory does not stand alone only to inform practice. Rather, they are dialectically related. "They are to be understood as mutually constitutive, as in a process of interaction which is a continual reconstruction of thought and action" (p. 34). A critical step in fostering this view in HRD professionals—practitioners as well as theoreticians—is to further understand practitioners' views on theory in their HRD work.

Purpose of the Study and Research Questions

The purpose of this study was to describe and understand the experience of HRD practitioners in applying theory to practice in HRD using a descriptive qualitative approach. Specifically, this study was an effort to begin to uncover how theory and practice in HRD integrate and serve one another. To do so, this inquiry sought to understand the experience of practitioners using theory in their interventions and work. Three areas comprised the focus of the inquiry: (1) practitioners' impressions of research and theory, (2) the benefits and barriers of using theory in practice, and (3) what things are needed to enhance the theory and practice relationship (in HRD practice).

Methodology

This study used a qualitative approach with the intent to describe and interpret. This method provides a way to more fully probe the thoughts and perceptions of HRD practitioners as they relate to theory. The goal was to inquire into their opinions, hear their stories and experiences using theory in their work, and to gain some insight into the "real" world that they live in and that academics are so often critiqued for not understanding.

Five participants were selected and all were willing to describe their knowledge and experience with theory and practice. The participants were purposively chosen to foster some diversity of perspective, while still meeting a set of criteria for inclusion in the study (Patton, 1990). All participants were chosen based on these following criteria: (a) advanced degree in HRD or extensive experience in HRD, (b) active work in field of HRD for at least 5 years,

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(c) involved in HRD work at organization(s) of over 300 people or in external consulting firms, and (d) held a position that involves a breadth of HRD work (training, OD, etc...). Three females and two males participated.

Semi-structured interviews were conducted with each participant after they had agreed to participate in the study. Each participant received a copy of 3-5 key questions that could serve as the basis for our discussion, although it was made clear that these questions would serve as only one basis for the interview. Each participant was prompted to reflect on, and raise, any issues they wanted to discuss about theory and practice in HRD. The interviews lasted approximately 1-1½ hours and were tape recorded while the researcher also took brief notes.

Analysis

Content analysis, analytic deduction, and a small degree of constant comparative method across subjects' responses (Glaser & Strauss, 1967) were employed during analysis. The interviews and interview notes were transcribed by the researcher soon after each was conducted. All transcriptions were sorted into tables that allowed for an initial sorting and coding into key themes being discussed during the interviews. After this initial sorting, the text of each interview was studied in-depth. Key quotes, examples, and stories that were particularly poignant or demonstrative of emerging themes were highlighted and color-coded. Finally, "organizer sheets" were created on a computer to assist in organizing categories of key themes that had emerged with supporting highlighted text. This was a recursive process of organizing and reorganizing information as more interviews were conducted and the researcher's understanding of the issues increased. To ensure some "dependability" (Lincoln & Guba, 1985, p. 288) of the results obtained from this data, a professor with extensive experience in qualitative research as well as a colleague were consulted to audit the trail of the research and authenticate that the results were consistent with the data collected.

Results

While three areas comprised the focus of the inquiry, a number of themes emerged. Ultimately, these were organized into four primary categories: (1) participants understanding of theory and research, (2) information about how participants judge the rigor of theory and research, (3) the perceived value of theory and research (at the individual and organizational levels), and (4) barriers and challenges in using theory in practice.

What is Theory and Research?

A basic understanding of what theory is and isn't represented a large area of ambiguity. This ambiguity was most powerfully expressed by one participant on a voice mail message as she was preparing for our interview (and later in the interview). She stated the following:

> What do you mean by theory in theory and practice? I think theory...do I operate from theory? Do you mean models? I thought of David Ulrich and the four roles of HRD...that's a model and I can see the quadrants and his components. Do you mean things like data...because when I'm working on the performance management and people rate themselves low I know to expect it because data shows that in a participative environment people are hard on themselves? So is that using theory? I don't know. Then, I think about theory and in school they say we should be doing something a certain way and is that theory? So data, advice, and models are three things I think of when I think of theory. What about best practices...is that a theory? How about trends of the day?

Practitioners interviewed for this study varied in their notions of what theory was, however most agreed that it was some sort of conceptual organizer or a model—visually memorable and model-like.

Practitioners interviewed were rather clear about the differences between theory and research. Research was thought of in terms of results. One participant stated that "research is the process to get at something" and another saw research as "validating theory—that's what I look for. When I say 'does this theory have some research behind it and what did the research show.'" Another participant echoed this response when he said:

> Research is the process by which theory results. I would argue that theory is the output of collective research. I would see that many people could provide research and over a period of time a theory begins to emerge that was sufficiently sound and that people felt was safe to adapt and reflect on to use.

For another participant, theory and research were also inextricably wedded. He explained that:

> Theory would be some kind of model for doing something based on people's good thinking...that has no real basis except it sounds good (pull out people's ideas etc...). Research is the application of theory and practice (real application) where we actually start looking at does this model help us to predict. Does this model actually do anything to really aid in getting to the outcomes?

Judging the Rigor of Theory

Although these practitioners' definitions of research and theory were aligned with what many theoreticians might say, participants tended towards less rigorous criteria by which to judge the quality of a theory and research. Most academic definitions of theory and research include a rigorous process that meets specific standards, regardless of the mode of inquiry. Practitioners interviewed here, on the other hand, used a variety of techniques to sift through the barrage of theories and models they are faced with in their work. One person admitted that there is no "high and mighty practice that I can tell you, although I sort of wish I could." The strongest thing that practitioners interviewed relied on was their own intuition, values and beliefs. This is displayed in the following quotes from participants:

- I will use the theory and put it in the brain and think about how that relates to my own experiences. If it doesn't relate at all, I will probably not use it. If it related some, I will adapt it to my own experiences. Very rare that I would take it all on board and do it as the book says.
- It's got to have face validity. I've got to know in my bones that this makes sense. Although I'm willing to read, some of these ideas sound crazy. But if the data and results are there I have to say "let me think about this a minute."

Most of the practitioners interviewed were also aware of the limitations of their intuition:

- Yes, but I'm also saying to myself that a lot of that (intuition) is based only on my experience. The theory has to overcome the intuition in some cases....my intuition is affected by built in biases.
- That said, there are certain times when now and again I'll read an article and say, "that isn't common sense to me because I've never thought about it that way." It's probably something that I haven't really thought about it, so I have to rely on something to produce some sort of response. Or, there's a level up from intuition...some sort of reflection....a sort of practicing theory that hasn't been tested out anywhere other than the fact that I've been through situations and I've then reflected on them and developed my own understanding of that.

Practitioners were proud of intuitive nature, and cognizant that their experience often lets them only grab on to things that corroborate with past experiences. Several of those interviewed recognized that they must work to keep their mind open to new ideas and theory—the ah ha's—and then p ssibly adjust their ideas and practice.

Practitioners interviewed wanted results, and use this criteria as central in screening theory. One person stated that she didn't "think of theory as something that somebody's proposing, but rather as something that someone's tried and can tell the results." Another said:

> The second strongest criteria by which we judge theory is who's doing it or who's saying it. I look at who's doing it and if they say Motorola is doing it and they have 238,000 employees and they seem to get a good response, I think, gosh, I should do what they're doing. So, if it's a Fortune 500 I kind of listen more. I look to see how long it has been around, what were the results.

This emphasis on "tried-and-true" results resonated throughout the interviews. One person stated that they know the model is sound "when it works." Another person described his process of evaluating the blockbuster hit books by Senge on systems thinking:

> Well, if people tried it and it worked, then it works. Whether he's done the due process on the academic side, I'm not going to make a deal about it. Go look, there is a bibliography, there are Ph.D. people who he is pulling from, he works at MIT, O.K. The point is that it's working.

Value of Theory and Research in Practice

Individual Value

The economist John Maynard Keynes (1936) reflected that "practical men, who believe themselves to be quite exempt from any intellectual influence, are usually slaves of some academic scribbler of a few years back." Although this divide between theory and practice seems to be a perennial issue dating back centuries, this quote reminds us that many practitioners find some degree of value in theory. This was underscored by the practitioners interviewed for this study. On an individual level, practitioners reflected that theory was necessary to "ground yourself in", thought it was something that could be counted on, and that it enhanced their credibility with their stakeholders. One person stated:

> To a certain extent it's about giving them some security in me. It gives me a certain amount of standing in their eyes. If I was to just put some recommendation in front of them and they turned around and asked me "why", then I would have more than my common sense way of doing it. Having the research allows me to cite when its been done, it provides me a safety net.

Practitioners interviewed for this study used theory and research to provide supporting evidence that what they are doing is right or to steer them in a direction. They also employed it to ensure consistency among their colleagues (especially within internal departments)—to "use shared models and theories so that regardless which one of us went into the problem we'd be using the most appropriate model or theory." In addition, most of those interviewed agreed that theory saves them time in their work. One person stated, "we're too busy doing it to think of how to do it. You can do your work or think and do your work, most of the time around here we just do our work. Theory helps us think *and* do our work."

Another distinct perceived benefit was the capacity of theory to question assumptions and mental models and force necessary reflection and thinking. One person expressed the need for theory to "prompt a discussion that enriches learning—to call into question some preconceived notions and foster exploration." Another woman stated that "theory gives me new eyes." Another individual described how theory pulls her into the future, "theory is often way out there and someone is pulling me towards something that I haven't thought of, towards a way of looking at things that I haven't thought of before."

Finally, a powerful theme that emerged from the interviewees was the role that theory can play in avoiding faddish and solely customer-focused practice that they perceived as typically ineffective and even dangerous. One person said:

> The people I have seen in practice are a grab bag, they don't have any conceptual models, what they have is a tool bag. With a tool bag, what you end up doing is bringing more and more baggage and pretty soon it's a suit case. With conceptual theory, it allows you to go with what you know and add as its necessary. For me to contribute at the business level, I need to be able to play business against not a bunch of tools, but play it against an integrated, theoretical base.

Another individual offered a powerful metaphor for this trend that he fights in his practice much of the time:

> We have to be customer-driven, but only to an extent. We can't listen to customers all the time. They come to us with their requests (those fads we all read about) and it's ridiculous! You know I don't go to a Doctor and tell them what's wrong with me and how to fix it. While we might do that to some extent, if the Doctor goes too far with our solution, we don't think that they are a competent doctor. That's what happens to HRD practitioners...we need to be customer sensitive but there's a limit if we want to maintain our competency and credibility.

Theory was viewed by most of those interviewed as beneficial towards achieving their goals of good practice.

Business Value

The business value of theory was not so heartily declared! Overall, clients and stakeholders of the HRD practitioners interviewed do not seem to value theory, and, in some cited cases, actually seem to disapprove of its

use in practice. This was exemplified in this statement from one participant who said, "I know my clients and they trust me to have expertise. However, use of theory can be over-delivery. There's always trade-offs between business specifics and clients needs and how I can enhance expertise or our solutions through tools and concepts." This was reiterated again when one participant blatantly stated that "they actually don't care a damn, they're much more interested in the 'is it going to work for me' than they are about the theory itself."

In this study, the value of using theory in practice was perceived at more the individual level than at the organizational level. One participant believed the use of theory was advantageous to organizations "because only by using the right theories and research that underpins them are they increasing their odds of actually getting success." However it was clear from many statements and examples provided by these study participants that organizations they work with trust that HRD professionals will have the knowledge to be effective and to use that expertise wisely.

Barriers

Of all the topics probed during interviews for this study, barriers to using theory in practice were undoubtedly the topic of most passion! Practitioners interviewed have all attempted to incorporate theory in to their work and have encountered many, many barriers that they were anxious to discuss.

Bad Reputation

One woman who works inside a rather traditional manufacturing company offered a story that, to her, epitomized the challenge she faces when using theory in her work:

> Theory often has, in my world, a bad connotation. The other day I was having a run-in because I suggested we pass around an 8-page booklet we put together to help the performance appraisal process be more effective....and it's based on some solid and well-respected theory. Nobody's got it! This woman I was talking with disagreed with my wanting to get it out to our managers. Why? As she stood up she said to me, "see you deal in theory and I deal in reality, and I have to clean up the messes you create."

Another practitioner interviewed for this study found that working under the guise of HRD and HRD theory was too limiting because of the reputation of each. He said, "I found myself spending more of my time selling, and convincing, and influencing. So I got out of HRD and got into business management." Then, he went on to cite examples of using very sound HRD theory cloaked in a different reputation that he felt had more respect.

Language

One significant component of the bad reputation discussed above was the language used in theory. It was unanimously and strongly critiqued for it's complicated wording and tone. One person stated that the language used in theory is "full of exclusivity and doesn't touch the human spirit." Another explained that most of the time his colleagues and employees don't even consult theory because of how complicated it is to read.

Another critique was that the talk of theory is not the lingo of business. The message from each of those interviewed is that HRD practitioners have got to speak the language of business better and speak theoretically less and less. An example was offered by one woman who recently read a proposal submitted by a colleague of her's. She said, "sometimes I read this psycho-babble stuff and I think this is just bunk! Anybody who reads this would say 'why are we paying you to do this?' It's spinning words. It was so disconnected from the world we live in."

Lack of Understanding Business and the Pace of Business

The language problem could be connected in some way to another major theme that emerged. The HRD practitioners interviewed clearly felt that theory was not connected to the demands placed on HRD practice. The problem, according to one participant, is "the slower-paced nature of academia." Academia was repeatedly criticized for not understanding the practicality of the problems out there, the need for solid, predictable outcomes/deliverables, and the pressure for application. For example, one practitioner explained:

> My problem is that someone will come to me with his issue and with my limited access to scholarly resources it can take 2-3 weeks to get the articles I want. The manager is not prepared to accept this delay! He will turn around and say 'stuff the research, let's just do it'. My cycle time to deal with problems is very short. I'm not saying that is right, but that's the reality of it.

One of the consultants stated that "business people need instantaneous application...if they don't see application within ½ hour they get upset—literally!" Furthermore, the problem is worsened by the lag time between when research gets conducted and when it gets published. McLean (1997) stated "by the time the research gets published (years), the best practice has evolved through real-time intuitive research, or the practice no longer fits the need" (p. 8). This was most certainly expressed by the practitioners involved in this study.

The Inadequacies of Theory and Research

Theory and research were critiqued in quite a few ways, too numerous to even discuss in-depth here. Table 1 provides some primary themes that emerged in this category, and just one, representative comment from the interviewees on the issue.

Table 1

Inadequacies of Theory and Research

Issue	Comment from HRD Practitioner
The "always something new phenomena"	"I don't care that it's not new. Use it enough that you can tell me that it really works. Creating it and testing it, not just spinning it. Prove to me that it works and that you're not just producing something new to get printed."
Too Micro	"Often that great thinking gets watered down when they start researching it. Research needs to be more macro, not so micro."
Focused on problems, not solutions	"Papers will endlessly look at the problem from a different angle. Meanwhile, no one comes out and says this is the solution. It's almost as if practitioners are expected to look at all these papers and come up with their own understanding...translate all this somehow...into something they can use themselves. I can understand why academics shouldn't be in the game of unbelievable or over-generalizable conclusions, but what practitioners really want is someone to say 'you should be doing it this way.' "
Assumes some level of pre-knowledge	"To really understand the issue you're reading about, you need another 20-25 articles that the one article cites. The articles tend to build on the existing understanding rather than saying that this is the existing and this is how it adds to it. Rather it says 'you will know from this author who wrote in 1992'), well most of the time I don't! As a practitioner it feels like I have to dig deeper and deeper to even begin to understand the issue."
Differing competence levels	"We've got a lot of senior trainers who floated up the training track and are now being told that they need to get out there and do some HRD consultancy work and they go out and all their training has been in delivery...they couldn't quote you 2 theories if you asked them. Every problem they see, they have to try to frame it in these two theories that they know. They would never think of going to do a literature review or of thinking around the subject."

Discussion

The goal of qualitative inquiry is to understand and interpret—to make things clearer—not to generalize. However, a deeper and more comprehensive understanding of just this small slice of the theory-and-practice issue offers much for HRD professionals to reflect on in terms of guiding future action. In this spirit, I have begun to reflect on some practical implications and encourage the reader to add their own reflections and scrutinize these preliminary ideas for thoughts that resonate with them.

Each component of the system bears some responsibility in addressing this theory and practice gap (McLean, 1997). Thus, there are implications that I see for both academia as well as for practitioners. Due to limited space available here, they are summarized in Table 2.

Table 2

Recommendations for Improving Theory-to-Practice

Recommendations for academics	Recommendations for practitioners
• Refine definitions of theory and research. Identify and hold true to standards by which to judge theory and research. Teach practitioners this information! • Create and provide practitioners more tools to reflect and critique their own practice. • Acknowledge the pressure practitioners face to apply and create positive results. Help them to meet and manage this endeavor. • Maintain a high-level of involvement in business and performance problems organizations face. • Demonstrate the value of using theory in practice through case studies, articles, etc… • Work with stakeholder groups to help them recognize the value of HRD theory/research. • Package theory/research in language and formats that cross boundaries of understanding and appeals to a wide variety of people. • Check assumptions when writing-up results. Do you assume a level of pre-knowledge? Who is your audience? What is the relevance? • Align research agendas with practitioners, and undergo research with practitioners. • Actively foster a "translator" role to specialize in translating research and theory into concepts and words practitioners can resonate to. • Increase outlets for dissemination.	• Acknowledge value of theory as well as its limitations. • Increase knowledge and skills in understanding, judging, and using theory and research. • Work with your colleagues and others in your network to identify criteria by which to judge theory and research. • Identify what theory and models you currently use in your work. Scrutinize them for soundness. • Challenge yourself to consult at least three scholarly resources on the next HRD issue you face. • Contribute to theory by creating research opportunities in organization in which you work. • Partner with academics who are actively researching and engaging in partnership research. • Critically reflect on the HRD work you do. Use research/theory in that process. • Increase outlets for dissemination, as well as resources to consult

The final implication that I have reflected upon speaks directly to the issue of raising the standards of the profession. This must become a goal of *both* academics and practitioners. This idea actually came up in an interview with one of the participant's who commented that, "…there is no consequence for practitioners who don't use theory. The variables of successful practice are not linked to research/theory—they are about general intelligence, job experience, and personality." This cannot remain the norm if the gulf between theory and practice is to be bridged. The issue is about more than competence, although that certainly is a primary component. Watkins (1994) has written about "professionalizing" HRD and indicated an increasing need to ensure that HRD practitioners have education and qualifications to meet some minimum standards. However, she also called for a level of integrity and commitment to effectiveness that can be rooted in standards coming out of theory.

As a result of reflection and discussions I have had with the participants of this study as well as some of my colleagues, I have begun to envision a continuum on which practitioners can place themselves (or be placed) and that has helped me to reflect on this issue of setting and meeting standards in the profession. It is visually depicted and described in Figure 1. When I showed this framework to one of the participants of this study, he commented that what was key, then, was to:

> …shift practitioners along that continuum. Once they are sold on being reflective practitioners and valuing theory and research the next obvious step is to become scholarly practitioners because then they are the people who start thinking "I can't reflect on this stuff because there's no theory to educate me on this so what can I do to fill that gap?"

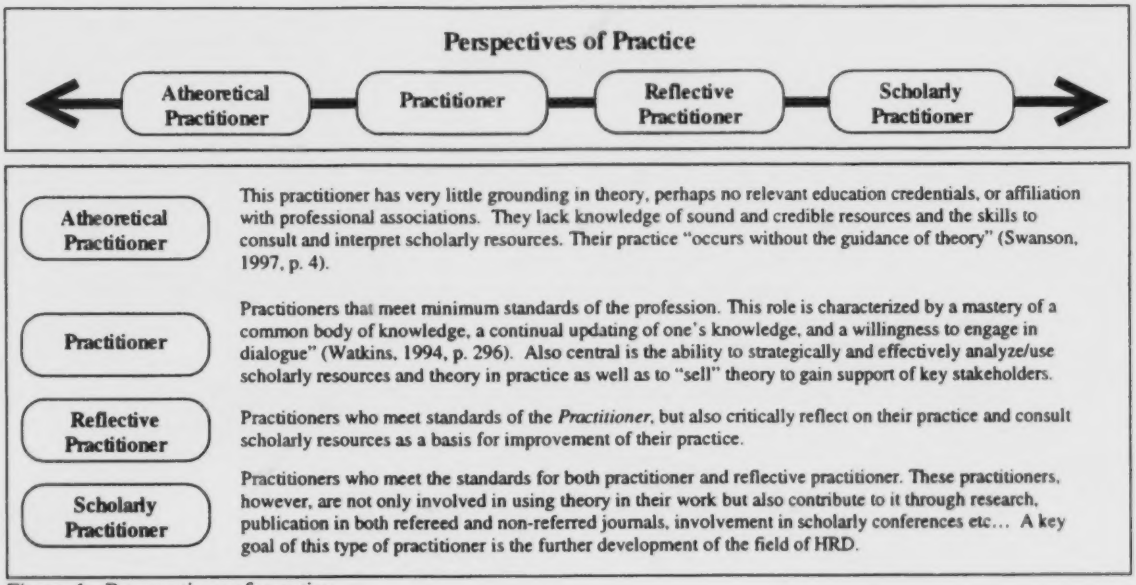
Perspectives of Practice
Atheoretical Practitioner
Practitioner
Reflective Practitioner
Scholarly Practitioner
Atheoretical Practitioner
This practitioner has very little grounding in theory, perhaps no relevant education credentials, or affiliation with professional associations. They lack knowledge of sound and credible resources and the skills to consult and interpret scholarly resources. Their practice "occurs without the guidance of theory" (Swanson, 1997, p. 4).
Practitioner
Practitioners that meet minimum standards of the profession. This role is characterized by a mastery of a common body of knowledge, a continual updating of one's knowledge, and a willingness to engage in dialogue" (Watkins, 1994, p. 296). Also central is the ability to strategically and effectively analyze/use scholarly resources and theory in practice as well as to "sell" theory to gain support of key stakeholders.
Reflective Practitioner
Practitioners who meet standards of the *Practitioner*, but also critically reflect on their practice and consult scholarly resources as a basis for improvement of their practice.
Scholarly Practitioner
Practitioners who meet the standards for both practitioner and reflective practitioner. These practitioners, however, are not only involved in using theory in their work but also contribute to it through research, publication in both refereed and non-referred journals, involvement in scholarly conferences etc... A key goal of this type of practitioner is the further development of the field of HRD.

Figure 1. Perspectives of practice.

Conclusion & Relevance to HRD

This paper represents a further exploration of the issue of theory and practice in HRD—from the voices of practitioners. The purpose of this study was to contribute to the HRD knowledgebase by moving beyond informal inquiries and informed opinions and conduct a formal inquiry to help us understand even more about the issue. In order to do this, the inquiry sought to understand the experience of practitioners using theory in their interventions and work. Three areas comprised the focus of this inquiry: (1) practitioner's impressions of research and theory, (2) the benefits and barriers of using theory in practice, and (3) what things are needed to enhance the theory and practice relationship.

I have attempted to offer some implications for HRD as a profession—both theoreticians and practitioners. The need to attend to this issue is only more potent as I draw to a close here. I am reminded of a powerful statement by a practitioner attempting to contribute to the narrowing of the gaps that exist between theory and practice:

> By definition, we are an applied science. Our theory development, processes, and success are derived from the relationship of HRD practice in organizations and the evidence that proves that the practice is sound and appropriate. Both practice and theory development are central to our discipline. As a result, we can ignore neither the art of application or the discipline of scientific rigor. (Leimbach, 1997, p. 13)

Indeed, in the words of one of the participant's interviewed for this case study, "each side is lop-sided. If you know enough, you know they're not complete without each other. So, theory and practice together make a whole."

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The Status of HRD Research Literature in 1997

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Human Resource Development (HRD) provides purposeful, organized development of adult workers to improve individual, group, and organizational performance. As the field matures, the quality and scope of the literature becomes increasingly important in shaping the profession. This study provides a qualitative analysis of the number and characteristics of HRD research articles published in the year 1997, focusing on research methodologies, analytical and statistical tools, organizational participants, and types of journals. Previous studies by Sleezer and Sleezer (1997) and Arnold (1996) are used for comparative analysis and to establish trends. Our study showed an increase in the overall rate of publication of HRD articles in journals from a broad cross section of related fields. There have also been measurable shifts in the types of studies and methodologies. This study also points out the need for further literature research studies.

Keywords: Human Resource Development, Research Literature, Journal Publication

Human Resource Development (HRD) provides purposeful, organized development of adult workers to improve individual, group, and organizational performance. At the individual level, HRD enhances the growth of workers within the context of their jobs, career paths, group interactions and overall organizational structure. At the group and organizational level, HRD enhances and improves work processes, outputs and capacities for future performance. As HRD has matured as a profession, it has developed a specialized body of research. However, little has been written about the body of HRD research (Jacobs, 1990; Sleezer & Sleezer, 1997), and what has been written and published is often not in the hands of practitioners (Swanson, 1998 a). Because of the links between HRD subject matter and other fields such as psychology, systems theory, education, economics, and organizational behavior, HRD articles are often published in journals that target other specialties (Jacobs, 1990).

Earlier studies on HRD research literature were provided by Sleezer and Sleezer (1997) and Arnold (1996). Sleezer and Sleezer identified the core journals that published HRD research. They searched the citations available through the ERIC, ABI/Inform, and PsycLit electronic databases using search terms that reflected key elements from various HRD definitions. The researchers used specific criteria to identify HRD research articles published between 1980 and 1994 in refereed journals. For example, educational institutions were excluded, as were studies involving individuals not already in an organization and those concerning nonadults. This study identified 18 journals as core sources for HRD research on the basis that each journal had published at least 15 articles within the study period. The Sleezers noted that further research is needed in categorizing core journals and understanding the scope of the HRD field.

Arnold (1996) took a different approach to understanding the emerging HRD field. He looked at the publications from one acknowledged source, the Academy of Human Resource Development Conference Proceedings for 1994 and 1995. Arnold classified the articles based on the type of research and the tools used to explain the findings. Arnold divided the studies into categories as follows: 37 library research or speculative, 57 descriptive case or field study, 8 field or laboratory experiment, and 5 theoretical model or instrument construction. He then categorized each study based on whether the method of analysis was qualitative or quantitative. Of these, 58 were qualitative studies, while the 49 quantitative studies consisted of 41 descriptive case/field studies and 8 field/lab experiments. Arnold concluded that the community of HRD scholars leaned heavily toward library and speculative works, and posited that the field might be better served by increasing the amount of systematic and experimental research.

By systematically examining the HRD literature published in 1997, the present study builds on the Sleezers' and Arnold's work. First, we describe the methodology used in this study to identify, select, and analyze research articles. Then we present the results and implications based on the analysis.

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Research Methodology

The aim of the study was to gain insights about HRD research published in 1997. Accomplishing this aim involved surveying the literature, categorizing the articles, data interpretation and synthesizing conclusions. Each article included in the study was examined to determine (a) where the research article was published, (b) the context for the study, and (c) the methodology and tools used in conducting the study.

Surveying the Literature

Surveying the literature involved using a systematic process to identify articles relevant to a specific definition of HRD. The works which served as a basis for this study differed in their definitions; nevertheless, it was necessary to choose one in order to provide consistency in the selection and review of the articles. After considering various definitions, the authors settled on Swanson's (1998 b) definition, which follows:

HRD is a process of developing and/or unleashing human expertise through organization development (OD) and personnel training and development (T&D) for the purpose of improving performance. The domains of performance include the organization, process, and individual levels. OD is a process of systematically implementing organizational change for the purpose of improving performance. T&D is the process of systematically developing expertise in individuals for the purpose of improving performance.

The criteria used to select the articles from all sources for this study were: (1) the article was published in a refereed journal during 1997; (2) it addressed the practical implications of some issue of relevance to the practice of workplace learning and performance; (3) the article was in English; (4) it reflected systematic research; and (5) it fit within Swanson's (1998b) definition.

First, we followed the search methods of Sleezer and Sleezer (1997) to find sources of current research studies. Using the same electronic databases, 46 relevant articles were found. To identify references to HRD research studies that were not contained in the databases, we also obtained the appropriate issues of the journals and searched their tables of contents. Since the time of the Sleezers' study, additional search tools have become readily accessible. Previously, CD-ROM compilations offered the most complete and available means of indexing. Today, the internet includes a wide variety of searchable databases in real time for academic and professional journals. To broaden the scope of inquiry, we chose Article First because of its comprehensive nature and its ready access to the academic and professional community. The keywords that we used in the searches were derived from human resource development topics and subject matter. They included human resource development, human resource, training, change, self-efficacy, mentoring, organizational change, teams, performance, learning, intervention, profitability, evaluation, cognition, conflict, burnout, cynicism, interdependence, assessment, appraisal, commitment, decision-making, perception, volunteer, and transfer. Article First identified approximately 70 additional articles as potential sources of HRD research. Of that number, 20 were found to fit Swanson's definition, and were analyzed further. The data collection from all sources resulted in 66 relevant articles from 23 journals (see Table 1).

We used multiple resources to identify which journals were refereed. These included: The Serials Directory: An International Reference Book, (1995) 9th ed. Vol. V.; Ulrich's International Periodicals Directory (1998) Vol. 5; R. R. Bowker's Magazines for Libraries 9th ed.; Cabell's Directory of Publishing Opportunities in Education. Vol. II., 3rd ed.; Cabell's Directory of Business and Economics (1990) 5th ed. Vol. 1-3; and Cabell's Directory of Publishing Opportunities in Management and Marketing (1997-1998) 7th ed. Vol. 1-3. In addition, we examined some journals. For example, Performance Improvement Quarterly was not listed as refereed in any of these sources. However, examining the journal's contributor guidelines confirmed its status as a refereed publication.

Categorizing the Articles

The researchers read and classified each article according to its subject, research methodology, research participants, and publication venue. Next, the researchers (a) compared the journals for the collected articles with the list of core journals identified by Sleezer and Sleezer (1997); (b) classified the collected articles using the four types of research and the two tools cited by Arnold (1996); (c) classified the articles according to the organizational nature of the group studied; and (d) classified the articles according to their keyword identifiers. Choices were made about categories based on personal judgment. Disagreements on classification were resolved by consensus. The quality of the articles was not considered as a factor.

Data Interpretation

Completing this step involved considering the results of this study relative to Sleezers' (1997) and Arnold's (1996) work. Articles were also categorized based on the context for the study. First, we compared the journals that published HRD research in 1997 with the list of 18 journals identified by Sleezer and Sleezer (1997). Twelve of the 18 journals published relevant articles in 1997. These included: Human Resource Development Quarterly (HRDQ), Performance Improvement Quarterly, Journal of Organizational Behavior, Personnel Psychology, Journal of Applied Psychology, Organization Development Journal, Human Relations, Academy of Management Review, Academy of Management Journal, Public Personnel Management, Public Administration Quarterly, and the Journal of Applied Behavioral Science. Table 1 shows for each journal the number of articles published in 1997 and the number of articles published for the years 1990-1994.

Table 1.
Journals That Published HRD Research Articles

Journal	Number of HRD Research Articles Published 1997	Number of HRD Research Articles Published 1990-1994*
Human Resource Development Quarterly	7	23
Journal of Organizational Behavior	7	12
Journal of Applied Behavioral Science	5	2
Journal of Vocational Behavior	5	
Group & Organization Management	4	
Human Relations	4	7
Journal of Applied Psychology	4	10
Organization Development Journal	4	8
Performance Improvement Quarterly	4	14
Industrial Relations	3	
Organization Studies	3	
Personnel Psychology	3	12
Public Administration Quarterly	2	10
Public Personnel Management	2	15
Academy of Management Journal	1	9
Academy of Management Review	1	6
Applied Psychology: An Int'l Review	1	
Educational Psychology	1	
Human Resource Management	1	
Journal of European Industrial Training	1	
National Productivity Review	1	
Organizational Dynamics	1	
Training Research Journal	1	

* Sleezer & Sleezer (1997) p. 188.

The reader should note that the table must be interpreted cautiously because the two studies differed in several important ways (e.g., they relied on slightly different definitions of HRD, looked at publications over different amounts of time and used different references in determining whether a journal was refereed). Nevertheless, the comparison is still suggestive. Over time some, but not all of the Sleezer's (1997) core journals continued to publish HRD research, although not necessarily at the same rate. Other journals were added to the original group.

Second, we classified the relevant 1997 articles using the categories identified by Arnold (1996) that included four types of research (i.e., field or lab experiments, descriptive case or field studies, library research or speculative, and theoretical model or instrument construction) and two tools (i.e., qualitative and quantitative). The results for the 1997 articles were as follows: 13 field or lab experiments; 43 descriptive case or field studies; 8 library research or speculative; and 2 theoretical model or instrument construction. Table 2 depicts the relative percentages for each category in 1997. In this study 12% were library research/speculative as compared to Arnold's finding of 35% for the Academy of HRD Proceedings; 65% were descriptive case/field studies as compared

Arnold's 53%; 20% were field/lab experiments as compared to Arnold's 7%; and 3% theoretical model or instrument construction as compared to Arnold's 5%. The table highlights differences in use of specific research methods, especially, the decrease in field or lab experiments and the increase in library or speculative and descriptive case or field studies. This table should be interpreted cautiously because of the differences in article selection and reviewer characteristics.

Table 2:
Percentages of Research Articles by Type

Research Type	Articles in Arnold's Study*	Articles in 1997
Field or Lab Experiments	7%	20%
Descriptive Case or Field Studies	53%	65%
Library Research/Speculative	35%	12%
Theoretical Model or Instrument Construction	5%	3%

*Arnold (1996) p. 819

Next, the articles were classified by their reliance on qualitative or quantitative tools. The classification revealed that 21 articles of the 66 articles, (32%) relied on qualitative tools and the remaining 45 articles (68%) relied on quantitative tools. The articles that relied on quantitative tools were classified according to Arnold's (1996) list of quantitative methods of analysis that included: factor analysis, Chi square, ANOVA, correlation, means, proportions, variance and none. Of the 45 articles that used quantitative methods, most included simple measures such as means and variance. Some used more than one complex measure. Thirty-two used correlations, seven used ANOVA (analysis of variance), three used factor analysis, and two used Chi square.

Third, the articles were divided into categories according to the type of participants in the various studies. Ten categories were identified: government; business/industry; education; military; medical; professionals; unknown; mixed across business, educational, and governmental lines; financial; and proprietary education. Analysis showed that the majority of the research focused on 22 business and industrial, 9 governmental, and 9 educational institutions. The remaining categories together accounted for only a total of 26 articles (see Table 3).

Table 3. Number of Studies by Participant Source

Business/Industry	22
Education	9
Government	9
Unknown	8
Mixed across business, educational, and governmental lines	5
Financial	4
Military	3
Medical	2
Professionals	2
Proprietary education	2

Discussion

This study provides a picture of the current state of HRD research. First, there is a broad spectrum of refereed journals which publish HRD research. Within HRD, numerous subspecialties overlap with such fields as industrial psychology and business management. Journals in these specialties are increasingly available sources of HRD research articles. Practitioners searching for practical information must be made aware of these sources if research is to get into their hands for application in the field. Likewise, HRD researchers may want to broaden their consideration of journals for article submission.

Second, the study results suggests that journals do not remain static in the number of HRD-related articles they publish. For example, when the Sleezers (1997) looked at the top five journals for publication between 1990 and 1994, they found that other than HRDQ, journals that focused on personnel and performance were prime sources for HRD articles. Even then, the numbers were not high. This study suggests a shift in the journals that lead in publishing HRD articles. It also suggests an increase in the number of HRD articles for most journals published higher numbers. There are a number of possible reasons for this shift. There may have been more research in specific areas (e.g., organizational development) than was previously conducted and consequently more submissions. Also, there may have been shifts in the popularity of certain areas of research. Using Arnold's (1996) categories, little theoretical research appeared in the literature in 1997. Field studies and experiments dominated, and different journals had preferences for certain types of subject matter and methodology. Their editorial policies in this regard were probably a factor in the number and type of articles they published in any given year. These findings point to areas for further research. It might be useful to conduct an annual analysis of HRD articles so that trends in research and publication can be reliably ascertained.

With regard to the criteria examined by Arnold (1996), there seems to be movement toward a "systematic observation" type of research. The dramatic drop in library or speculative articles suggests that empiricism and statistical quantitative studies are becoming used more frequently. More studies used complex measures, (e.g., almost half of the quantitative studies were correlational). It is possible that the differences are due to the nature of what is deemed appropriate for publication versus what is presented for conferences because of the interests and needs of the intended audiences.

One factor that must be considered in interpreting the data is the difference between the scope of the earlier studies and the present one. For example, the Sleezers (1997), because of their definition of HRD, excluded research studies which were conducted in educational institutions and those which involved participants who were not directly part of a specific workforce. This may account for some differences in the results. Our study did not exclude such research, as long as the scope fit Swanson's definition of HRD. While there were only 9 educational institutions out of 66 such articles, they account for approximately 14% of the total number of articles. To some extent, differences between the results for this study and previous studies may be attributed to the chosen definition of HRD, and the criteria and method used in selecting articles.

As in other types of disciplined inquiry, there are limitations to this study. The processes used to collect and analyze data influenced the results in number of ways. For example, a different definition or other search mechanisms might have produced another group of articles. A variety of definitions were reviewed before one was selected as the criterion for the study. The databases were also a significant factor. There are potentially other databases available either on-line or in CD-ROM which might have yielded additional articles. No attempt was made to specifically access international journals, although those which were referenced within the selected databases were surveyed. The databases themselves could not be assessed for accuracy, and they possibly contained omissions which could affect the results. Keywords are the means of accessing information within the databases, and there are other relevant keywords which could have been chosen. Some might have produced results that are missing here. In addition, there are unavoidably biases among the researchers themselves which affect the outcome.

Conclusions

As the profession increasingly comes into its own, it appears that more HRD research was published in 1997 than in previous years, and the research appeared in a wider variety of journals. In addition, it appears that the relative proportions of research types published in 1997 differed from Arnold's (1996) findings. Whether these changes represent a permanent shift remains to be seen.

As a result of reviewing the foundational studies on HRD literature and designing the current one, several issues arose which need further study or clarification. These include the change in rates of publication of HRD articles in various journals and the definition of HRD.

One issue is the observed change in the publication rate of HRD articles in journals from associated fields. This study pointed to the existence of the changes, but not the underlying reasons. Such reasons for shifts toward or away from HRD research are currently speculative. Future studies could determine why certain publications have increased or decreased their publication of HRD-related articles. For example, what role does editorial policy play in article selection? Is the change related to the quality of the articles themselves in terms of either the writing or the research? Are HRD researchers failing to submit articles to particular journals, or has the overall submission rate increased? If so, why? Answers to such questions would give greater depth to the insights contained in this study.

A premise of this study was that the field of HRD has coalesced from scattered beginnings within a variety of related fields. As a mature profession, HRD should now be subject to a more concise, coherent definition. In the opinion of the researchers, a useful definition must include the variety of subject matter and processes which make up the profession. It must also be able to exclude what is not relevant as well as delineate what is. This study used

Swanson's definition, although five other definitions were considered. Some definitions were far too broad, while others were too narrow. In particular, the Sleezers (1997) specifically excluded educational institutions. They reasoned that such research often concerned teacher or educational training, which is usually not considered to be within the purview of HRD (C. M. Sleezer, personal communication, September 8, 1998). This position, however, ignores the types of research studies conducted within educational institutions that deal with HRD processes. Our study showed that valid HRD research was conducted in educational institutions. For example, such research articles dealt with theories of learning styles in work settings, transfer of training, negotiation skills, and training issues. Consequently, we believe educational institutions have a role to play in HRD.

Another rationale for the exclusion of studies in educational institutions was that the subjects were students rather than adult workers. This ignores several realities of modern college education. In today's world, adult workers or managers are a greater part of student bodies. HRD subject matter and processes have direct carry-over to adult workers and applicability to the workplace. Also, educational institutions frequently have entire academic disciplines that deal with issues related to HRD. Business, psychology, and human resource development are departments where relevant studies are conducted. Some of these studies are done at the request of employers on work-related topics and use students or mixed groups as the subjects. The researchers do not suggest that every training study generated by an educational institution is within the scope of HRD. Discrimination is needed in looking at studies from educational institutions, but to exclude them wholesale is to lose an entire body of work which could benefit practitioners.

We have already noted that one of the results of this study is the conviction that a more concise and comprehensive definition of HRD might be developed. Based on insights derived from the range of topics in the literature and the various existing definitions, the following definition for HRD is offered to serve as a basis for further discussion and conceptualization of the profession:

> HRD is defined as the purposeful organized development of adult worker proficiencies for individual, group and organizational performance. The focus is on knowledge, skills and abilities which foster technical, business, interpersonal and intellectual competencies.

Only a few studies on HRD literature exist. More consistent and frequent research on HRD publication is needed in order to stay abreast of the profession's development. This study extended earlier studies, expanded the database, and added a new inquiry into participant source. Similar research conducted annually would be useful to the HRD profession.

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Learning to Learn Strategies of Successful Real Estate Professionals: Implications for Learning in the Workplace

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This paper describes a multi-case study of how three successful real estate professionals learn to learn by using a model of the "Individual Learning System." This model adds to the concept developed by Robert Smith (1982; 1990). The professionals describe the strategies and resources they utilize to learn, and the type of organization, teaching competencies, and programs that professionals need to prevent professional obsolescence in the workplace.

Keywords: Learning, Professionals, Instruction

Constant changes in society and in technology will continue to create turbulent environments in the workplaces of the future. John Kotter (1995), professor of leadership at Harvard Business School, stated that it is essential for workers to aggressively seek learning opportunities at work to maintain job satisfaction and to ensure their employability in the turbulent economic environment of the 21st century. However, there is still a tremendous debate on how adults learn best in most professions. Professionals make up more than 27 percent of the current workforce in America, and they have a high degree of control and influence in the lives of people in society, Cervero, 1988. A real estate professional is a person "who is licensed by the state in which he/she practices, and abides by the code of ethics of the National Association of Realtors® (NAR) as well as all governmental laws" (NAR 's Membership Profile, 1996). Although several studies had been conducted during the last 20 years on how professionals learn and how to educate them for their practice in American society (Houle, 1980; Cervero, 1988; Curry, Wergin & Associates, 1993; Schon, 1983, 1987), until this research study, there was minimal research that had asked real estate professionals how they learn and how that information could be used to design training and education to aid them in keeping up to date with new information (Pajor, 1985; Sirmans & Sirmans, 1992; Chicago Association of REALTORS®, 1995). This study examined how professionals learn and what type of organizations, teachers, and programs are needed to enhance their learning in the workplace.

Theoretical Framework

The research study focused on the work of the late scholar Robert M. Smith. Dr. Smith wrote seven books and numerous articles on the topic of learning to learn. He developed learning to learn as an applied theory which he defined as the process by which people "possess or acquire the knowledge and skill to learn effectively in whatever learning situation one encounters" (Smith, 1982, p. 19). Smith's writings contain a comprehensive resource of all the literature, research, and theory on the subject of how children and adults of all ages learn in a variety of settings from classrooms to employee training workshops. Smith explored the subject through the works of several leading experts in the field (e.g. Tough, 1979; Erikson, 1968; Knowles, 1980; Cervero, 1988; Schlossberg, 1984; Schon, 1983; 1987). Smith used the information to design a course on learning to learn which he taught for many years at Northern Illinois University. This study advanced his theory by conducting research in the context of real estate. The themes that emerged supported Dr. Smith's assertion that learning to learn is context bound, and that it can vary /considerably from one context to another.

Research Questions

This research study attempted to answer four research questions:
1. How do successful professionals learn to recognize and react to complexities in their field?
2. What learning strategies do successful professionals apply to stay competitive in the profession?
3. How do successful professionals utilize resources as learners?
4. How might continuing professional education enhance the development of these learning strategies?

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Method

The qualitative research methodology of interpretive case study was used for the research because an intensive description and analysis of the phenomenon would uncover the interplay of significant factors that are characteristic of the phenomenon (Merriam & Simpson, 1995).

Participants

Exemplar real estate professionals were purposely selected based on Yin's (1994) definition of an exemplar case and the definition of a successful professional by NAR's (1996) Membership Profile." Each respondent worked in one of the three major areas of real estate: residential sales, property management, and appraisal. Ruth L. Theobald was vice president and director of property management of Affiliated Capital Corporation in Wisconsin. Phyllis Kendall Rosen was the managing broker for the Highland Park office of the Prudential Burnet Realty, a residential real estate sales office located in Highland Park, Illinois. Myron J. Evanich, Ph.D., was director of Valuation Management Consultants, Inc., an appraisal company located in Chicago, Illinois. The first two of the respondents were women, and the third was a man. The ages of the respondents ranged from mid-40s to 60 years old. The respondents had practiced a minimum of 12 years in the business. The respondents had attended college; one had an associate's degree, and one had a Ph.D. All three had real estate licenses as well as several other memberships and designations in real estate. The respondents worked full-time in the real estate business. All respondents trained professionals, and two of the respondents also were certified teachers in their field to teach continuing education (CE) in real estate. CE is defined as real estate oriented educational sessions or courses intended to improve the skills of licensees, to keep licensees abreast of changing real estate practices and laws, and to help licensees meet the government imposed educational requirements for license renewal (National Association of Realtors® Task Force, 1978). The three respondents regularly took CE courses, and two of the three respondents published in their field.

Procedure

The researcher studied the respondents for nine months. Standardization was obtained by taping one formal interview with each respondent using questions that were designed in advance, and all respondents were asked the questions in exactly the same sequence and manner (Richardson, Dohrenwend, & Klein, 1965).

In order to examine the data from the formal interviews, tables were designed to display the data, and quotations from interviewees and further explanation were presented by the researcher as needed to explain the data. The characteristics that emerged from these in-depth interviews were validated through review of tapes, transcriptions, and field notes of the interviews. The researcher contacted the respondents several times during this study as well as reviewed all published information about their companies and themselves in order to obtain accurate information. The respondents also received copies of the final transcribed tapes and edited any personal information that they did not want in the final case study. The information was further validated through documents, journals, literature review, and discussions with other professionals and educators in the field.

After the completion of the data analysis process, another phase of data analysis, a search for themes, was begun. The process used "concept mapping" (Smith, 1990) as a diagnostic tool. "A concept map depicts in a diagrammatic form, ideas, examples, relationships, and implications about a particular concept. The center or core idea is placed at the center or top of the page, and radiating from it are a number of spokes or lines leading to other concepts related to, or indicated of the central idea" (Smith, 1990, p. 49). Concept mapping enabled the researcher to group similar examples of large concepts together, and smaller concepts were set aside until they could be integrated into the larger themes; this process allowed the dominant themes to emerge from the data. The similarity of the process of the information gained in the case studies made possible the rich, descriptive data needed to interpret the phenomenon being investigated as explained by Merriam (1988).

Results and Findings

The findings suggest support for all four research questions. The real estate professionals were able to present similar information about how they learn to learn, and how organizations, programs, and teachers should provide education and training in order to aid their ability to learn in the workplace.

Six Themes

Because of their nearly identical stories, six themes emerged from the research study. The first three themes were related to the learner: (a) the procedure the learners develop to learn to learn, (b) the strategies the learners utilize to learn, and (c) the resources they employ for successes. The second three themes are related to organizations that provided CE for these professionals: (a) working in open/learning-system organizations, (b) training of educators, and (c) developing improved programs. These six themes will be explained below.

Theme 1 - Systems Learning Model. The learning to learn process of the real estate professionals who were interviewed in this study operated as a model of an "Individual Learning System." The professionals described how they used all knowledge gained through their life experiences, strategies, resources, and other professionals to improve learning in each learning situation. The professionals used a model of learning that was always in motion, evolving, changing, reflecting, evaluating, and improving. The model was developed through understanding the three aspects of these professionals: (a) the procedure they employ to learn to learn, (b) the ability to improve their learning strategies to relate to the complexity of the context and environment of their business, and (c) the personal characteristics of the learners that enable them to adapt in all learning situations.

The individual learner operates as a general open system model in the same manner as described by Senge (1990) that workers learn in learning organizations. Open systems recognize that biological or social systems have a dynamic relationship with their environment. An open system adapts to its environment by changing the structure and processes of its internal components. The systems approach is conceptualized as a series of inputs that, when acted upon by a transformation process, results in certain outputs. The learner is in continual interaction with his/her environment and therefore achieves a "steady state" or dynamic equilibrium as he/she retains the capacity for work or energy transformation. Therefore, the learner's survival in the competitive business world depends on his/her ability to operate as a dynamic, open, "system." The learner must continually improve and adapt to new learning situations by incorporating everything he/she learns into his/her business life, personal life, and in society into the process of learning. Every day, professionals must adapt to the changing context of their workplace, the environment, and their personal characteristics as learners.

Although the procedure of learning to learn remained the same for all three professionals, the information led to the understanding that each learner is also unique. The professionals described how they learned differently based on their gender, age, culture, life experiences, and life transitions. The information supported research by several authors (Belenky, Chinchy, Goldberger, & Tarule, 1986; Erikson, 1968; Gilligan, 1982; Schlossberg, 1984, and others). The process involves a holistic model instead of a linear approach to learning, and it leads to new understanding of how real estate professionals learn to learn. The professionals were further able to explain how their differences should be interpreted to design more effective organizations and education programs for their professionals.

Theme 2 - Strategies for Learning. The respondents in this study explained 14 strategies that enabled them to stay competitive in the profession: using self-awareness, self-monitoring, reflection, reflection-in-action, self-direction, lifelong learning, expertise, networking, interpersonal skills, personal motivation, innovation, collaboration, technology and a 7-step continuous problem-solving model. In the literature review, several authors described similar problem-solving processes (e.g., Dewey, 1933; Lewin, 1948; Argyris & Schon, 1974; Schon, 1983, 1987; Kolb, 1984; Meyers; 1986; Redding & Catalanello, 1994):

Problem-solving Model. The seven steps in the continuous-action problem-solving model are:

1. Conceptualize plan in his/her head by reflecting on previous similar experiences;
2. Set down the problem on paper in a tentative plan of action;
3. Gather data: talk to professionals, read, etc.;
4. Analyze alternative approaches;
5. Develop more complete plan by redesigning plan to reflect new insight;
6. Act on plan; and
7. Evaluate results based on consequences of outcomes of action.

The professional continues through the process to reflect and refine the plan as new information on the problem is gathered. Professionals may continue to go through the entire process several times, or they may use only one or two steps to update the plan. The professionals used reflection continually throughout the problem-solving process. They stated that their problems involved cycles of problem solving because they seldom solved their problems in one or two cycles. They use iterations or cycles to solve their problems such as explained by Arygyris and Schon (1974, 1978), Schon (1983; 1987) and Redding and Catalanello (1994). However, this model

is comprised of more steps than most problem-solving models in the literature, because the professionals explained that their problems are usually complex, and take a longer period to solve than in many other businesses.

Theme 3 - Resources for Learning. The respondents stated that they used six major resources to learn: mentors, experts, professional associations, technology, relationships, and supportive organizations.

Three Themes to Enhance Education and Training

Three themes were suggested by the respondents that related to enhancing education programs for professionals: (a) organizations that provide CE need to operate as "TQM Learning Organizations," (b) organizations need to improve training of teachers, and (c) organizations need to improve CE programs for professionals.

Theme 4 - TQM Learning Organization. In order for professional organizations to respond to the needs of professionals, their customers, and the public, respondents suggested that organizations should be designed utilizing the ideas and strategies of a TQM Learning Organization described by Deming (1986) with the model of the "open organizational learning system" discussed by many writers (Redding & Catalanello, 1994; Senge, 1990; Senge, Kleiner, Roberts, Ross, & Smith, 1994; Watkins & Marsick, 1993; Weisbord, 1990).

TQM is defined as a company that holds its primary philosophy as to provide total customer satisfaction. To accomplish its goals , the company embraces all strategies, tools, management techniques, and planning activity that embraces the philosophy of providing the best products and services to the customer, Deming (1986). While a learning organization is defined as one where all the individuals within the organization work together across boundaries to solve problems. A learning organization must involve: (1) systems thinking, (2) personal mastery, (3) mental models, (4) shared vision, and (5) team acquisition of knowledge as described by Senge, 1990. Respondents were able to articulate the importance for organizations to embrace all aspects of both concepts discussed above.

Theme 5- Competencies Needed by Educators. The Fifth theme illustrated the need to improve the training of educators who provide CE to professionals:

1. Educators must also be practicing professionals who understand the business.
2. Educators should be competent in teaching. They must understand the needs, characteristics, motivations, diversity, and disabilities of students. They must be able to use a variety of teaching methods (e.g. technology, lap computers, dialog), and they should use evaluations effectively to obtain feedback from students.

Theme 6 - Education and training programs. The sixth theme explained ways to develop improved programs for professionals:

1. Programs must provide relevant information for the level of expertise and area of practice of professionals.
2. Programs should order courses in different levels (e.g. beginning, intermediate, advanced).
3. Courses should be divided into modules when material is too long to be adequately covered in one session.
4. Courses should incorporate Case Studies.
5. Courses should have experts teaching subjects.
6. A wide variety of subjects should be offered (e.g. diversity, age, culture, and specialty areas such as appraising).
7. Subjects should be updated regularly.
8. Some courses should teach professionals how to use new technologies. Since real estate transactions went on the Internet in November of 1995, there is a tremendous need for professionals to learn to effectively adapt to use this technology.
9. Courses should be offered using a variety of delivery methods (e.g. distance education, home study, on-line computer, etc.).
10. Some courses should offer a practicum "hands on" experiences.
11. All courses should require participants to fill out evaluation forms of courses and instructors.
12. Courses should contain better assessment techniques in MCE to reflect practice instead of a test for relicensure.
13. All courses should be cost effective and timely.

Several recommendations for further research were made, the most important was to study the differences between how men and women learn in the real estate business.

Limitations

Since the study was limited to three case studies, the study can not attempt to predict successful learning styles of all real-estate professionals. Although the case studies lead to a deeper insights into the area of the study, findings from

case studies cannot be generalized in the same way as the findings from random samples. For this reason, this study should be the first step to lead to further research on the subject.

How this Research Contributes to New Knowledge in HRD

This research builds on an important theme in adult and higher education, and HRD-How do adults learn to learn in the workplace? Although significant research has been conducted in this area, the theoretical foundations of how professionals learn to learn in HRD remains an open field for research. The information supports and adds to the knowledge in the field in several ways: First, the study adds to the research by focusing on a sub-set of professionals, real estate professionals. The research provides a better understanding of how real estate professionals learn. This research could be duplicated by others to expand upon it to build more knowledge and understanding on the subject in other professional contexts.

Second, the research makes the connection that successful, licensed real estate professionals learn in the same manner as employees continue to learn in "learning organizations," and that the process they use to learn is a "systems approach." Professionals explained the process of learning is complex and adaptive to change; as a result, they learn in a more holistic fashion than former linear approaches to learning. HRD professionals need to expand their view of how professionals learn.

Third, the respondents are self-directed learners as discussed by Tough (1979) , Knowles (1980), and Smith (1982), and they learn differently based on their age, culture, life experiences, gender, and life transitions as described by Belenky et al. (1986), Erikson (1968), Schlossberg (1984), and Gilligan (1982). Therefore, HRD professionals must be flexible in designing programs that are responsive to the specific needs of their audiences. HRD processionals need to conduct more needs assessments, and ask professionals continually, before, during, and after programs, how to meet their needs, and how to make the information relevant to their particular context. HRD professionals should possess the ability to facilitate learning by using a wide variety of teaching methods. The information could lead to the development of more meaningful education and training for real estate, as well as, for other professionals.

Finally, organizations should be designed that combine the ideas and tools of the TQM learning organization by Deming (1986), with the ideas of the "learning organization" by Senge (1990). This organizational design would: (a) provide the best customer service, and (b) keep employees up to date with latest information and technologies. The TQM learning organization can provide a win-win atmosphere whereby HRD professionals can provide education and training that is responsive to the needs of all audiences involved.

Conclusions

The data from the research study established the connection between how real estate professionals learn and the type of organization, educators, and education programs that would support and enhance their learning in the workplace. The objective of the model outlined here is to provide a better understanding of how successful, licensed real estate professionals continue to learn using a "systems model." Based on this model, HRD professionals must be more responsive to the needs of their learners. How professionals learn in the workplace and what are their needs that would enhance their education-these are important themes in HRD. This paper addressed HRD's role in enhancing organizational design and education for real estate professionals. If future research replicates and supports these findings, the information will lead to a vision for the development of a more comprehensive educational programs for professionals.

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Vital Work: Spirit and Development Within the Natural Workplace

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What happens when we reframe work as a fundamental site of human development? This research explores two organizations where development becomes not a function of training but a way of conducting work as a whole. This study illuminates the lived experience of people who work within "natural" or "vital" workplaces. The educative function of the workplace is explored and principles for vital work are identified and defined.

Keywords: Organizational Development, Vital Work, Meaning-Making

Adults today spend more of their time and energy engaged in work than in any other wakeful activity; for the adult, work is the central domain for learning and for the development of our human capacity (Jarvis, 1992; Kincheloe, 1995; Watkins, 1991; Welton, 1991). Research presents a clear interrelationship between the structure of our work organizations and the psychological qualities and attitudes of the people who work within them (Balawajder & Popiolek, 1996; Mortimer, 1988; Pauchant, 1995; Riordan & Griffeth, 1995; Watkins, 1991; Williams et al, 1997); the everydayness of work serves as a context and source of learning and of self-knowledge. Work is, as Welton (1991) describes, a fundamental training site for a participatory and democratic society.

Such a perspective of the workplace moves beyond traditional ideas about the education and training of workers to enhance corporate profit. Rather, it brings us to consider the workplace itself as a curricular structure, an educative environment (Dewey, 1938) with the potential to stimulate or enhance, to restrict or distort, growth and development. Yet this educative function of work has been a largely neglected theme in the field of human resource development (HRD). In our efforts to ensure we are making "value-added" contributions to organizational performance, we risk losing sight of our field's tradition: to further the development of humans and to promote the growth and welfare of the larger society (Friedlander, 1996).

This research explores two organizations where development becomes not a function of training but a way of conducting work as a whole, and illuminates the lived experience within these environments. The educative function of the workplace is explored and principles for vital work are identified and defined.

The Organization of Work

Contemporary Workplace Reforms

We are experiencing today a pace, breadth, and depth of change unseen in any previous chapter in workplace development in the Western world. Innovations that emphasize the importance of learning and of personal and collective development can be seen in the emergence of less authoritative structures and more collaborative and democratic work processes (for example Briskin, 1996; Dew, 1997; Dirkx, 1996; Kofman & Senge, 1993; Marsick, 1987). Such efforts to reinvent the corporation depict a struggle to establish a vision of work founded on a more clearly articulated set of humanistic values and constructivist models (Aktouf, 1992; Dew, 1997; Dirkx, 1996; Meltzer & Wickert, 1976): shared rather than unilateral power; autonomous work groups; diversity rather than conformity. Within the margins of such change lies an implicit recognition of the interrelationship of the subjective life of the worker and the objective conditions of work (Aktouf, 1992; Watkins, 1991; Welton, 1991). Yet in spite of new reforms, technical-rational approaches to work continue to be the norm and reforms retain a distinct positivist flavor (Ketchum & Trist, 1992; Kincheloe, 1995; Pauchant, 1995). Reforms are appropriated or sanctioned in order to enhance worker quality, commitment, productivity, or morale. The extent to which such reforms add value to the organization is embedded almost exclusively within a capitalistic framework (Briskin, 1996; Dirkx, 1996; Morin, 1995). Contradictions and paradox exist. With increased democracy, there are increased surveillance technologies. With open sharing of information, heated debate over office Internet access. With increased participation, restrictions on cubicle "prairie-dogging."

The worker continues to be conceptualized as an object ruled by causes, whose subjective experience is separated from the objective conditions of the workplace (Watkins, 1991). Research indicates that such a fragmentation results in an experience of work which constricts and distorts, rather than enhances and enlarges the

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human spirit (Aktouf, 1992; Watkins, 1991; Welton, 1991). This constitutes a miseducative experience (Dewey, 1938), a "false and stunted humanism" (Aktouf, 1992, p. 412). The centrality of work in our lives is generally relegated to work's role in creating a preferred lifestyle and there is little regard or consideration for how people develop, what people learn, what they come to know, outside the confines of sanctioned training.

The Natural Workplace

Reframing work calls for more than innovative strategies subtly inserted within the Taylorist paradigm (Aktouf, 1992; Block, 1997). It calls for deeper questions concerning our assumptions about the nature of work, how work is structured and organized, even the very purpose and meaning of work itself. In contrast to contemporary reforms, a "natural," more fully human workplace is emerging that ceases to artificially create, manage, appropriate or control the experiences of others (Aktouf, 1992; Semler, 1993). Grounded in a developmental view of work, the natural workplace appears to restructure the workplace around fundamentally different social, psychological, and economic assumptions. Named as radically humanist, democratic, mindful, conscious, even spiritual or soulful, this way of work is conceptualized as passionate, creative, nurturing, socially just, and more fully human, where profit and market share become not the goal but the by-product of vital or right work (for example Adams, 1984; Aktouf, 1992; Briskin, 1996; Clark, 1967; Dew, 1997; Dirkx & Deems, 1996; Fox, 1994; Hawley, 1993; Kofman & Senge, 1993; Meltzer & Wickert, 1976; Wenger, 1996; Whyte, 1994).

This sense of a more authentic, more fully human workplace appears to be qualitatively different than many other workplace reforms. The natural workplace is grounded in a particular view of human nature, a view supported within diverse bodies of literature (for example Aktouf, 1992; Dewey, 1938; Egan, 1994; Fox, 1994; Handy, 1994; Hawley, 1993; Jarvis, 1992; Kincheloe, 1995; Kofman & Senge, 1993; Moore, 1991; Pauchant, 1995; Wilber, 1995; Whyte, 1994). Primary to this view are the ideas that humans are (a) endowed with consciousness, right judgment, and free will -- we are actively involved in our own becoming; (b) fundamentally defined by our community and relations with others; (c) innately drive towards development and transcendence; and (d) share a common need for partnership and connectedness, for self-expression, and for meaning and purpose. Natural workplaces appear to structure and organize work in a way that facilitates the expression of this nature.

A growing body of literature (for example Bolman & Deal, 1995; Briskin, 1996; Fox, 1994; Hawley, 1993; Kofman & Senge, 1993; Whyte, 1994) presents an impressive picture of how work might be experienced within such environments: as vital, nurturing the human quest to embrace life fully with animation, meaningfulness, and purpose. Most of this work, however, consists of anecdotal evidence from proud CEOs (for example Fishman, 1996; Melrose, 1995; Semler, 1993). A relatively small body of ethnographic or anthropological research into more humanized workplaces or work units (for example Balawajder & Popiolek, 1996; James, James & Ashe, 1990; Massarik, 1976; Riordan & Griffeth, 1995; Schneider, 1990) describe a culture of work that embraces highly self-directed, participatory practices, community building, opportunities for friendship, recognized contributions, trust, and respect for humanity. They depict a strong corporate consciousness manifest by organizational members' engagement in the active processing of information, awareness of individual and collective strengths and weaknesses, awareness of the full environment in which the organization exists, and awareness of the interdependency of its systems (for example Massarik, 1976).

The idea of the natural workplace has been developed conceptually by numerous scholars, and the testimony of organizational leaders presents a rich and thought-provoking picture of what work might be. Within existing representations, however, there is a continued emphasis on the *perception* of work rather than on the *experience* of work (Briskin, 1996). There remains a distinct lack of research which presents the lived experience of workers within these sites, and we can only speculate on the extent to which people themselves experience these workplaces in an educative way. The purpose of this study is to explore how people experience and make meaning of the natural workplace, to build on our understanding of the qualities and characteristics of such an environment, and to investigate ways in which the natural workplace may contribute to growth and development.

Research Questions and Significance to HRD

This study explores the lived experience of people within two organizations working to create more humanistic, natural workplaces. It focuses on the nature of work and how people experience and make meaning of work within these environments. The following questions guided this inquiry:

1) How do workers experience and make meaning of organizational life within the natural workplace?

2) How is the natural workplace structured and organized? What are the qualities and characteristics of such an environment?
3) How and what do people learn, of themselves and of others, within the natural workplace? In what ways does the natural workplace facilitate growth and development of the individual and group?

Significance of the Research Problem

Argyris (1976, p. 405) described, "If the validity of the concept of the organization is to survive, the new designs will have to raise the level of the quality of life within the system and genuinely value high-quality living as much as efficiency." Conceptualizing the workplace as a fundamental site of learning and development offers this opportunity by creating experiences where "the purposes, driving forces, culture, behavior standards and results are more closely aligned to human needs, aspirations, and potential" (Koch & Godden, 1996, p. 173). An on-going and direct concern of organizational leaders lies with the objective conditions within the workplace in which interactions take place. Growing interest in such concepts as quality of work life, organizational learning and transformation, and work as vocation or calling, demonstrate a new focus on the establishment of working conditions that will "awaken in the worker the desire to work together in a spirit of community, creative energy, and meaningful purpose" (Aktouf, 1992, p. 419). The human spirit at work may be understood less as an object to be improved and much more as a force for collective creativity and innovation.

Human resource development practitioners are called to look more deeply into the ways in which the environment nurtures experiences that lead to growth, and how to utilize the physical and social environments "so as to extract from them all that they have to contribute to building up experiences that are worth while" (Dewey, 1938, p. 40). There is little agreement, however, as to what this means in a real and concrete way. This study contributes to our understanding of the workplace as a site for personal and organizational development, and illuminates conditions of work which are most conducive to a vital workforce. Developmental aspects of work will enhance our knowledge base of learning in terms of sociocultural, tacit, and self-knowledge. This study also contributes to our understanding of adult learning within the context of work as informal and incidental.

Research Methods

To understand another's experience, and to gain insights into the context which surrounds this experience, is to understand how a person makes meaning of a phenomenon. Meaning-making is the interpretive aspect of cognition and perceptions and, by definition, it is phenomenological (James, James & Ashe, 1990, p. 42). This study is grounded in Husserl's concept of phenomenology (as in Holstein & Gubrium, 1994; Moustakas, 1994; Sinha, 1969) a method that allows us to understand the ways the experiential world is produced and experienced by its members (Holstein & Gubrium, 1994).

Two midwest organizations participated in this study, having met the criteria for working towards a more natural work environment. This criteria were established based on a review of literature concerned with humanizing work environments (for example Fox, 1994; Hawley, 1993; Pauchant, 1995), and included:

- high levels of autonomy (e.g., use of participatory and democratic work processes, lack of dress code, and the commitment of the organization to an individual's personal goals);
- tolerance for ambiguity (e.g., lack of an employee handbook or task-specific job descriptions);
- relatively high levels of trust (e.g., lack of detailed policy and procedures, open leave policies, self-reporting time records, or full disclosure of financial information concerning organizational status);
- non-competitive recognition of employee contributions such as profit sharing plans maintained by employees;
- evidence of concern for the "whole" person (e.g., health/wellness facilities or programs, encouragement of educational development, social activities, or flexible time-off policies); and
- minimal hierarchical structure and evidence of individual power based on earnings or job title (e.g., office space determined by need rather than level of position, lack of reserved parking spaces, or open access to designated organizational leaders).

From these sites 20 self-selected people, representing a diverse mix of age, educational levels, gender, and positions within the organizations, participated as co-researchers. Data was collected through multiple methods

including non-participant observation, document review, focus groups, unstructured field interviews, semi-structured interviews, and follow-up interviews. Information was recorded with the use of detailed field notes and audiorecordings. The participants/co-researchers also participated in the analysis and the writing of the findings through member checks and providing feedback to the primary researcher on the written narrative.

Data analysis consisted of three major stages (Moustakas, 1994): phenomenological reduction, imaginative variation, and synthesis of meanings and essences. Audiorecordings were transcribed verbatim and each transcript underwent a process of horizonalization, establishing meaning units and themes, development of individual textural and structural descriptions, and the synthesis of meanings and essences across cases. From this synthesis a composite textural-structural description was constructed, representing the shared essence of the work experience. The composite descriptions were presented to participants to ensure they represented an accurate and rich portrayal of their experiences and meaning-making within their workplaces. Accuracy and trustworthiness of the data (Lincoln & Guba, 1985) was ensured through on-going contact with participants, triangulation of data, member reviews, and peer review.

Findings: The Experience of Work

Findings reveal these more natural workplaces as relatively unstructured, with open books and open systems of communication, fluid work groups, high levels of autonomy, ample opportunities for friendship, and de-structured work processes. Being here is "vital" and animating involving a pace that is both draining and energizing, and filled with contradiction and paradox, conflict and uncertainty, high emotion and "fun." Participants structure the experience of work in five universal ways, described in their own words below: Self and Self-Other Relationships, Connectedness and Relatedness, The Role of Past Experience, Individual Differences, and Meaning in Work.

Participants fill their days with activity which moves them and the organization forward. The days are both "too long" and "not long enough." When the roller-coaster is in motion, people are tired and supportive, teasing and resentful, hopeful and frustrated, excited and angry. "Fully alive." Pushing to be their best often demands that all their energies be directed towards a narrowly-defined product goal, subordinating equally important objectives and desires. It's frustrating. Work is depleting, yet somehow adds "life to the hours" both at home and at work. Work requires continual negotiation between both outward and inward projections: fulfilling your own needs in the challenge to learn more, do more, be "better" than last time, sometimes clashes with specific organizational needs and interests; personal time sometimes clashes with the need for overtime to complete a project or shipment date. A deep sense of safety comes in knowing that you are trusted, in conjunction with a darker sense of doubt in knowing that you are solely accountable within that trust.

Self in relation to others involves demands, interruptions, arguments. There is a sense that "I can be myself" in the midst of others, having no need to justify actions or to remain on guard lest someone misinterpret our actions. Interacting with others--in play, in dialogue, even in conflict--serves a generative function in the creation of new ideas and suggestions, new perceptions of others, and new perceptions of self. Within this environment, it is with great difficulty that people talk only of "I." Rather, it is "our" work, "our company," "our" project. This collective orientation frequently runs up against the personal valuing and significance of choice and autonomy at work.

The structures, processes, management, and directives of work--both explicit and implicit--make up a web connecting people, job tasks, goals, and meaning. Respect is a key foundation--respect for one's views and variations, for how you express yourself through your work, and for how you relate with others. This respect leads to the creation of work processes which encourage dialogue and innovation. To exclude someone from full participation within the workplace is an expression of disrespect or of "not recognizing humanity": not listening, not involving, not engaging, not making eye contact, making decisions which affect a work group without their input and insights, responding to one's ideas with ridicule, sarcasm, or silence. Inclusion demands participation and voice, which constitute "being a person" at work. Only through such participation and interaction will product quality be assured and improved, a sense of purposeful work be created, and interest and energy maintained.

As participants describe, respect is closely related to trust, because "when you respect another, you see your common humanity"--you see yourself within them. This implies high levels of trust from the first moment of relationship, given freely rather than following a testing period, trust which is maintained until actions occur which prove misplacement. "Empowerment" is a part of the human condition, rather than something that is granted or bestowed. Such trust is incompatible with tight controls, and implies such conditions as the personal use of company equipment, elastic timeframes for work, even the willingness to have others laugh with you at your own

mistakes and trust they have no hurtful intent. As one leader described, trust is the belief "that people want to perform at their peak," then providing what they need and getting out of the way so they can do so.

With trust comes responsibility: the group is responsible for the project, the person for their work, the company for the person. Connected to responsibility is a strong sense of both personal and collective accountability. When you hold the responsibility, you are accountable for the decisions you make, the work performed, the hours claimed, the copies made. Accountability recognizes, however, that outcomes are not always a matter of individual performance but the result of factors outside our control. The need for close interaction with others becomes necessary then, in order to support conditions which make accountability, responsibility, and understanding and empathy, realistic conditions of work.

Joking with co-workers, talking with the boss, examining a part, or taking time off to run the car into the garage become significant activities when framed against previous work experiences and our prior sense of what work is. Guilt lingers at times, "old tapes" claiming we should be more productive, or suggesting that people are watching, whispering, when we arrive for work 15 minutes late or leave a few moments early. Hesitantly, we sit for the first time among a work group, listening to heated debate and struggling to express our own ideas when that has never been invited until now. Escaping past bonds demands learning: learning to participate, learning to trust your instincts and judgment, learning to fight it out within the project room and still remain friends afterwards. The past loosens its hold as we come to know that we are valued and important here, that people will listen to our ideas. The construction of new meaning can be filled with frustration, though, and we sometimes insist on imposing the structures we are most used to as a way of confronting and overcoming the uncertainties before us.

A wide range of individual differences seem to influence the experience and meaning of work. Some people described a childhood upbringing they believed impacted their comfort or discomfort with their present workplace. Instincts for taking action may influence our sense of whether a system is too rigid or not rigid enough, provides too much structure or is chaotic, is safe or threatening. Other participants suggested age as a critical feature: younger workers believed their young age made them more flexible, adaptable, able to interact more authentically with others; older workers believed these same characteristics were attributed to their greater maturity and experience within the workplace. Individual differences, though frustrating at times, also serve to create a culture and work climate that are filled with the noise of life, the full range of sounds that accompany celebration and anger, joy and conflict, work and play. Some suggested it is the absence of such noise that reflects the more oppressive, restrictive work environment.

Within our society, the meaning of work will perhaps always be somehow connected with our ability to create and maintain a lifestyle. Yet within this environment there lie more fundamental meanings as well. According to these participants, work constitutes how we care for others and how we contribute to their lives. "It's a reason to create." Work means personal growth through the daily struggles and challenges, through expressive activity, and an ever-broadening perception of our presence in the world. It means the "thrill" and pride in "seeing something come from nothing," or in "pushing myself to do what I did not believe I could do." The experience of trust, responsibility, being connected with others, and recognition help to create meanings of value and of the awareness of one another's essential humanity. In the past, when these have been absent, participants present a reliance on financial outcomes to define meaning within work. While the material rewards as a meaning for work remain for all people, they increasingly dim as we engage more closely with others in purposeful work.

Discussion of Findings

Participatory or democratic social arrangements are more likely to result in experiences which arouse curiosity and strengthen initiative (Dewey, 1938), necessary conditions for continuous improvement. The natural workplace expresses its educative potential through interaction with others, structures and systems for communication which demand interpersonal competence and dialogue, movement from self-protective to ever-increasing autonomy, and the encouragement of postformal thought through processes which compel complex means of problem-solving. The "dark side" of work is balanced in part by ample opportunities for informal relationships which provide opportunities to re-energize and rejuvenate from the complexities present within the workplace. Participants indicated that interaction with others, and the nature of relationships which developed, affected not only the quality of the work but also one's sense of self. Cognitive development accompanies increases in social-cognitive experience as people are challenged to reflect on their beliefs or behaviors, to debate and dialogue, and to approach their work more critically (Sinnott, 1993). Increasingly complex ways of solving problems develop with social experience and encourage critical and postformal thought (1993).

The vital workplace depicts an organizational consciousness which values mindfulness--the active processing of information, differentiation, and always-present awareness of context. Langer (1989) proposes that human potential can be expanded through processes which demand an active rather than passive experience of work, cultivating individuals who continually create new challenges for themselves. Organizational goals are achieved by people who are originators rather than pawns, and expressive creativity encourages innovation rather than conformity and satisfaction with the status quo. Organizational leaders play a key role in removing barriers and developing mindfulness -- not by way of control and power but in terms of de-structuring work and the persistent and careful attention toward what will be of most use to the workers.

The idea of partnership, of interconnectedness, of holism, within the workplace leads us to appreciate that we are not separate from the world but a necessary and vital part of it. This interconnectedness, however, can and often does arouse conflict and contradiction. Rather than working to alleviate such uncomfortable conditions, leaders recognize that the tensions created can serve as originators of growth and development, opening avenues for new learning about self, about others, and about being a part of the work community. The natural workplace is as full of frustration as it is of joy, of angry emotion as it is compassion, of unpredictability as it is trust, of conflict as it is of happy and satisfied people. It seems to embrace all expressions of human nature, and values them each as sources of human animation and meaning. People, as one participant described, "live loudly" in their shared pursuit of business profits, relationships with others, and meaningful work.

Cultivating Vital Work: Implications for HRD

Participating workplace leaders involved in this study support the idea that *how* vital work evolves follows no set formula; there is no clear prescription of "steps" to take nor a clear point indicating when an organization has "become" a vital workplace. It is an on-going process of unfolding and learning; reframing organizations as sites for adult development begins not with a prescribed formula but with critical assumptions (see for example Aktouf, 1992; Bolman & Deal, 1995; Briskin, 1996; Dirkx, 1996; Welton, 1991) of human nature: that people are active constructors, not pawns, within the workplace; that we carry in us an innate drive to create something larger than ourselves; and that we are naturally motivated and empowered. When these are not expressed in our work it is less due to a deficit people hold but because of barriers embedded within the work context or our past experience. The findings of this study support the anecdotal evidence, prior research, and theory of the relationship betwee: work and learning in suggesting central principles for HRD and the cultivation of the natural or vital workplace. These principles guide the concrete ways in which work is structured and conducted. While these principles are not necessarily exhaustive, they do present an experience of work which focuses on a way of being and becoming, on presence rather than appearance.

Solidarity. It is imperative that people within the workplace be seen as active and willing participants rather than as instruments of production. We must abandon management based on authority and in its place create opportunities which nurture people's natural desire to belong, to contribute, and to engage in meaningful work. Managers are not "artisans of liberation;" rather, a culture of convergence and sharing must be inserted into actual practice where people act on their intentions through reasons, feelings, and choices rather than by "causes." Only then will we recognize a unity and quality of worklife based on community of interests, objectives, and standards.

Engagement. Participatory and self-directing work processes provide the necessary opportunities for development through autonomy, relationship, and engagement with others. This participation, however, must be unrestrained by channels of command and mechanisms of control. Rather than simply a symbolic participation, people must participate in a real way with the sharing of profits, power, property, and decisions. The *perception alone* of autonomy, of being valued, and of participation will not sustain the more humanized workplace. It must, as Aktouf (1992) describes, be a lived rather than appropriated experience, one which holds the human actor in high regard in an authentic way. We also know we cannot engage people simply by asking them to participate; based on prior experience, many people will have to learn what it means to participate. The quality of engagement within the workplace is enhanced when leaders foster dialogue, authentic relations, and reflection by modeling these behaviors, challenging people, asking questions, and offering opinion over directive. Dialogue and reflection are sustained when people can see positive outcomes from these exchanges--when they see their voices are heard, their questions answered, their ideas considered, when information is freely shared, and when understanding is viewed as an important part of work. People's sense of business literacy will be enhanced through the free sharing of information and business problems concerning all aspects of the business--hiring, orienting new workers, sharing in the evaluations of work completed, regular information concerning the company's financial performance. Engagement also demands recognition of people's contributions in order to sustain their efforts and energies. Just as

critical are opportunities to come together in informal ways which help cultivate a sense of solidarity and engagement with others: common eating or other socializing areas, company-wide events held, and organization-wide communication must be emphasized. These serve to enhance a real and meaningful sense of unity and connectedness.

Mindfulness. It is critical that an organization become willing and able to reflect on itself, to critique and question its own work relations, and to cultivate a more mindful or conscious orientation to the full environment in which it operates. Growth and development are fluid constructs, and there is never a point where either an individual or an organization has "made it" to a definitive evolutionary end. This more conscious and critical perspective provides the means for increasing both personal and collective capacity, to expand identity and embrace a larger view of ourselves in the world.

Connectedness. A greater sense of holism, of connectedness and interconnectedness, must be recognized as it pertains to the worker and the product, the person and the environment -- we must view work in its full complexity and multidimensional character. This includes, for example, the relation between language, meaning, and work, and the relationship between communication, information-sharing, and a person's ability to contribute in a meaningful way. Conflict and contradiction are inherent components of connectedness. Rather than rushing in to "fix" problems, to ease tempers, or to speed production, organizational leaders are instead compelled to prod and push, to challenge people towards resolution. In this way, "problems" become forces for learning and innovation. For this to happen, however, leaders must reframe their sense of "resistance," and be willing to sit with the tensions created rather than jumping in to resolve problems themselves. This holding of the tensions encourages people to break out of their comfort zones, to think more critically, and to transcend rather than concede.

Meaningful Purpose. Finally, the purpose of work based strictly on economic assumptions must be challenged. Where more traditional workplaces and many workplace reforms focus on profit and consumption as primary goals, the vital workplace understands these as natural byproducts of a more humanized environment and as a means to contribute to a greater cause. Work is not simply about money, but about satisfying our need for expression, innovation, community, and purpose. When we acknowledge the full function of work in our lives, we cannot help but begin to reshape our organizations. Begin by asking, If profits are important for us to survive as a company, why is that survival important? To what end are we, as a company, truly working? And then, How can we best reflect this focus in the ways in which we conduct work?

Conclusion

Reforms that are targeted to change the behavior of others are not reforms at all (Aktouf, 1992; Block, 1997). Such reforms oversimplify human nature and depict the worker as an object rather than as subjects in their own right. By continuing to objectify the human at work, we relegate development to that which happens only when authorized by someone else, embedded within traditional structures of power and control. This ideology fosters a narrow and restrictive growth -- a miseducative experience -- in both the individual and the organization (Dewey, 1938; Welton, 1991) because it fails to acknowledge the complex relationship between individual experience and the full organizational context.

In contrast, this study suggests the natural workplace holds a greater educative potential. This study suggests that by de-structuring work and through the manifest valuing of the whole person within the organization, the natural workplace removes the barriers which serve to restrict and distort growth. Real and fundamental change within the workplace evolves through dynamic and contradictory means, where development is not a function of training but a way of thinking about and conducting work as a whole. This study reveals characteristics of educative work environments which return the person at work to that of a subject who acts upon his or her world. Such a workplace is not a utopia; it demands of people greater flexibility, the development of new skills, and a high tolerance for conflict and ambiguity. Fortunately, these environments provide the necessary context and opportunities for developing these qualities.

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Action Learning as a Strategy for Inducing Psychological, Cultural, and Organizational Boundarylessness

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A global, borderless marketplace; a new global citizenry; and an unprecedented demand for quickly mobilized, boundaryless responses to meet consumer and citizen needs are serious facts of life for today's organizations. At bedrock, the boundaryless condition appears to yield competitive advantage to corporations and at least potential humanitarian advantage for collaboration among governments, non-government agencies, and other international entities. Research data are beginning to show how action learning specifically provisions the journey to boundarylessness, as told by those who do the journeying.

Keywords: Action Learning, Boundaryless Systems, Psychological Freedom

Critical incident data from an on-going, comprehensive study of qualitative action learning effects, data from investigation into the nature of "boundaryless" organizations and individuals, and a noted absence of theory that connects action learning and boundaryless organizations has led to this non-positivist, multi-source inquiry. It has been triggered specifically by statements action learners make about how boundaries once present-- limiting their abilities to think and act--tend to disappear when they are engaged in action learning. In the critical incident data analysis, which has been facilitated by use of NUDIST software, feeling "boundaryless" emerged as a consistent theme.

It is in the research tradition of open systems thinking that a discussion of implications of this dominant theme is undertaken. When there are isomorphic relations between phenomena –in this case action learning and boundarylessness, then there is cause for examining the two together. Unfortunately----because no such definition exists -- this cannot begin with a clear definition of "the state of boundarylessness" that covers either the case of action learning as a group phenomenon or that adequately treats the case of the individual learner who moves from psychological constraint to psychological freedom. Yet as direct quotations cited later will show, moving from constraint to freedom is precisely what action learners say they do. Presumably, there is no boundaryless organization that does not expect to engender some degree of psychological freedom in its boundary-spanners, as well.

Searching the term uncovers a frustrating collection of assumptions about what it means to be in a *state of boundarylessness.* Most certainly these assumptions do not get a full review in the new literature of organizational change. A ruling assumption seems to be that it is an organizational, not an individual or personal issue. Another assumption implies that the term of newer mint --*boundaryless* --is somehow more explanatory and conducive to action than the older systems term, *open.* Just beneath the surface of the latter assumption lies a compelling call to throw open those boundaries that have traditionally and purposefully been closed, in the hope of now achieving greater flexibility of thought and action. Boundary-busting is expected to catalyze the removal of obstructions to the free passage of information throughout the organization.

Hastings makes such assumptions when he envisions the new organization as a loosely coupled organic network (1993, p. xvi). In his words, "boundary-busting" is a way to achieve this network state, involving:

> a systematic awareness and elimination of physical, personal, hierarchical, functional, cultural, psychological, and practical boundaries and barriers to such cooperation and communication as a continuing process that is necessary to perpetuate the ability of the new organization to stay flexible and adaptable.

This is his prescription for the boundaryless organization. It implicates people, but does not suggest how they can be helped to move toward boundarylessness on an individual level, to achieve the psychological freedom necessary for non-hierarchical networking.

Using Hastings work as one of many possible signposts for traveling further along this conceptual path, we can infer a pair of further assumptions the advocates of boundarylessness are making: that individuals will

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somehow learn to do and be whatever working in a boundaryless organization requires of them, and that this will be of general benefit. But holding to such assumptions could fly in the face of the realities of cultural differences, psychological readiness for open communication, individual adaptability, and the tendency everyone in or out of the work-place has to protect preferred comfort zones.

While companies like General Electric (Ashkenis, et al, 1995)seem to spend considerable time, money, and energy in the process of encouraging boundary-crossing, not every organization will be willing or able to make proportional investments. Will a new elite of individual boundary spanners emerge from the boundaryless companies, leaving behind those in the same or other organizations who are not enabled to join them by any organizational means? *Should everyone, to some as yet undetermined degree, learn to be without boundaries?* What is it that is let loose when employees encounter opportunities to rethink what their lives in organizations consist of, and what boundaries do or do not work for them? We believe that studying action learning is giving us some preliminary answers.

What Does It Mean to be Boundaryless?

Reviewing current literature makes it apparent that the language of boundarylessness is anything but precise. It is used assumptively and inconsistently, although it may represent earnest attempts to open up our understanding about what systems are, or are becoming. Just as there are relative values attached to degrees of openness, there are relative values attached to what is expected to happen at the boundary where crossings begin. Is the intention to eliminate the boundary altogether --as Hastings seems to advocate? To span it, permeate it, or simply ignore it as if it did not exist? Is the boundary sometimes a solid wall to be breached as if by assault? Is the boundary that we think we are seeing even there?

These are not inconsequential questions, for they have to do with both personal and organizational integrity. Is there □safe conduct□ across the borders for some but not for all? If there is selectivity, is it gendered or culture-bound? What gets handled at the boundary as free currency, and what does not?

Is boundarylessness ad hoc or temporary? If the boundary is real, what happens to it over time? What will happen to individuals, to the organization, and to its environment if any boundary in question goes away forever? There is no end to our lack of knowledge about such matters.

Some of these issues may come into clearer focus if we view the action learning set as a microcosm of the broader enactment of organizational and national boundarylessness. There are reasons to believe that a set of six to eight concerned individuals, fully engaged in learning about itself, its work, and about each member of the set is actually such a microcosm. It is *holographic*, with the whole represented in each of the parts; *heterarchical* and diffuse in power; *structurally unconstrained* and free-flowing; always ripe and tensile with the *creative variety and virtual latency* of the whole set and of every member in it. (Morgan & Ramirez, 1983; Ghoshal, 1993; Hastings, 1993; Willis, 1979)

How We Have Approached Our Study

Our research methodology is mixed, using history, conceptual modeling, critical incident analysis, and observation of action learning sets specifically but not necessarily confined to these. Certainly a phenomenological perspective is involved.

We have not found published research that makes explicit the nature and effects of action learning set boundarylessness (as the term is now being defined) and we have so far failed to find even a working definition of individual boundarylessness. In the search for allied concepts, we have come closest to what we are looking for in futurist literature, especially evolutionary systems theory; in the theories of psychology including research literature in small group behavior; in theories of community, social ecology and communication including cultural communication; and in existential theology, the epistemological source of most 20th century writing on the nature of dialogue (e.g., Bohm, 1990).

We have not found research that even asks the question of how differing degrees of individual boundarylessness in set members, or correlatively in set advisors/ mentors, may affect the degree of boundarylessness in the microcosm of organization that we call the set. While some literature on organizational readiness for action learning (Redding & Catalanello, 1994) has begun to emerge and the need for executive

sponsorship of and commitment to all organizational interventions is well known, what degree of boundarylessness is needed and what it looks like in individual leaders of macro organizations is not clear.

The absence of organizational trappings, including status differentials and prescribed ways of doing things, is a distinguishing feature of action learning. Because no one knows what will happen, the boundarylessness of the set is experienced powerfully, immediately, and potentially, long after a set is officially finished with its work. Significant short and long term changes are induced that, if mapped into the macro organization, could take it into genuinely new territory. The key to what to do in organizational turmoil runs deeper than the massaging of organizational boundaries, and individual psyches are involved whether we like it or not. This is overtly recognized in the action learning set.

Boundaryless: A Working Organizational Definition

There is a tone of urgency in the struggle for new language to describe new kinds of organizational and human possibilities. We say it repeatedly because we really feel it: we are in an era when waves of change occur so rapidly that before we have half struggled to our feet and accommodated to one, another and another breaker are upon us. In an earlier work, Dilworth has definitionally linked boundarylessness with the changing face and body as well as the chaotic movements of contemporary organizations. The following brief, with a quoted excerpt, are drawn from the detailed descriptive entry that first appeared in the 1997 edition of *The Encyclopedia of Public Policy and Administration.*

To a very large extent, our ways of understanding boundarylessness are limited to structural interpretations. There are three commonly understood types of structural boundaries: (1) lateral, between functional components, 2) hierarchical or vertical, between organizational layers, and 3) perimeter, demarcating organization from environment. A fourth dimension requires diagonal interactions that cross-cut other boundaries. These interactions are more typical of Japanese companies. All four types of structural relationships are considered malleable, or at least not sealed against tampering, as constant organizational restructuring in every corner of our lives reminds us.

Boundaries also form the edges of sharply or fuzzily defined mental □boxes□ of organizational members. Often invisible, these nevertheless may operationally define what occurs in any given organization. Some of these are boundaries bricked up by accrued (and often unexamined) experience; others are culturally derived, and still others may have roots in individual personality.

Public sector organizations and their employees are not immune from the necessity of questioning traditional boundaries. While political constraints are recognized, the problems of interagency, inter-government coordination are not insurmountable, and the increased capacity to provide services is a powerful incentive to loosen the bounded systems. All systems are presumed to have opportunity to become less constrained by visible and invisible boundaries. The following definition is therefore to be understood as independent of organizational context. To be *boundaryless* involves the

> ways in which organizations delineate themselves internally and with their external environment, with a goal of minimizing constraints to flexibility imposed by boundaries, whether functional, political, psychological, hierarchical, multicultural or related to professional specializations.

The appearance of both cultural and psychological boundaries in this definition returns us vividly to the problem of defining boundarylessness in personal as well as organizational terms. Again, there are assumptions to sort and peel off from the root concept.

What Does It Mean Personally to be Boundaryless?

Any conclusion that personal boundarylessness necessarily exists in a boundaryless organization may be erroneous. The converse may be equally suspect: just because a person appears to be exercising a high degree of psychological freedom (i.e., acting boundaryless) in an organization, it does not necessarily follow that the organization is boundaryless. It may be anything but, and the boundaryless person working there may easily be an unrecognized or unwanted anomaly in that organization. Further, if it is imagined that becoming boundaryless is highly valued by everyone, such an assumption is easily challenged. What actually happens is that the slightest hint of incipient

boundary freedom may evoke from any particular group of individuals a wide range of responses --from eager endorsement to cautious skepticism to pure terror and retreat. Thus the question of what boundarylessness means to each individual goes unanswered, and how much we can expect each to move in the direction of boundary freedom is also unanswerable, case by case. It may even be that some individuals are subject to considerable life disruption and unmanageability if boundaries are blurred or lacking. (Cloud & Townsend, 1992). Certainly every person reconsidering boundaries is courting vulnerability.

Correlatively, if persons do not learn and change in the direction of boundary freedom, can organizational boundarylessness be anything but the structural kind? In a world where we have come to recognize the inexorable influences of chaos, constantly deconstructing and reordering the universe, what choices do we have about living and working □boundaryless?□

Finding Boundary Freedom in Action Learning

Often the participants in our research on action learning seem naturally to seek and find boundary language to describe personal breakthroughs in their set evolution, their own unfolding of awareness, and their tackling of the problem in focus. Simultaneously they demonstrate considerate behavior toward those who are unready for such breakthroughs. Though occasionally in frustration they would like to throw a set-mate into the murky seas of boundarylessness, sink or swim, upon reflection they tend to see that learning to swim is an individual matter and needs to be individually paced. The implication is that boundarylessness is not something that can be forced in the organizational microcosm of the set.

To the best of our knowledge, none of the action learners who have left written records for us were working in organizations that claimed to be boundaryless. But in the context of the set they say they behaved in boundaryless ways. This confirms that there is a need to define personal boundarylessness as distinct from the macro-organizational context. It is doubtful, however, whether such a definition can ever separate itself from the milieu of close interpersonal relationships, i.e., the existence of a community sufficiently attuned to learning and personal growth so that responsible individualism and boundarylessness can flourish. It is because action learners experience a heightened consciousness of themselves in relation to others that existential thinking has relevance. It is a theory base perhaps less familiar to many readers than other sources of theory cited above, and for that reason it is highlighted here.

Existential Thought and Boundarylessness in Action Learning

Organization theorists know that reference groups are important to employees. The action learning set dealing with real problems in real time is certainly a reference group of a very high cognitive and affective order, involving high personal and organizational stakes. In an action learning set, the forming of community --i.e., set cohesion --is a critical factor in how learning takes place and work gets done. Though he certainly was not referring to action learning sets, a quotation from Paul Tillich helps our understanding of why sets operate the way they do:

> Participation is essential for the individual, not accidental. No individual exists without participation, and no personal being exists without community being. The person as a fully developed self is impossible without other fully developed selves [with whom it is in relation]. (1951, p. 176)

The extent to which bonding occurs in small group behavior --if the small group may be taken as a latent community --will also affect the degree of boundarylessness achieved by individuals in the group. Buber (1958) offers two warnings against the valuing of task performance over group process. Obviously from the quotation, Buber is speaking of group activity generally, but the warnings seem custom made for action learning sets that struggle with prioritizing work outputs and the requirements for learning through process and information exchange. In our research as well as in the findings of others, this difficult balancing act has emerged as one of the primary concerns of set members. They might find Buber's perspective helpful. His first warning is:

> In the view customary today, which is defined by politics, the only important thing in groups, in the present as in history, is what they aim at and what they accomplish. Significance is ascribed to what goes on within them only in so far as it influences the group's action with regard to its aims...

> By this simplified mode of valuations the real and individual worth of a group remains as uncomprehended as when we judge a person by his effect alone and not by his qualities. (p.204).

The second warning is against collectivity, which he defines as

> not a binding but a bundling together: individuals packed together, armed and equipped in common, with only as much life from man to man as will inflame the marching step. (p. 205).

What this reminds us is that there are times when action learning sets do not reach the desired state of community but instead remain a collectivity so totally devoted to conquering the task performance that the opportunity for learning is denied and any incipient psychological freedom suffers frost-kill. In contrast, Buber explains, the experience of community is being *with* one another with everywhere a turning to, a dynamic facing of the other. Collectivity, he says, is based on an organized atrophy of personal existence, [while] community [is based] on its increase and confirmation of life lived toward one another. (p. 205).

Buber insists that dialogue and community are matters of personal freedom and commitment:

> The life of dialogue...begins no higher than where humanity begins. There are no gifted and ungifted here, only those who give themselves and withhold themselves. (p. 209).

One more excerpt from this briefest of tours of existential thought refers directly to change in the structure of consciousness and change in the scale of values. Berdyaev (1958) asserts that

> in the fight for the freedom of man, for the manifestation of the free man [the] process goes deep and its effects can but slowly become apparent. It is a profound interior revolution which is brought about in existential, not in historical time. (p. 157)

The existential view is that attaining psychological freedom or boundarylessness (and in their most constructive sense these terms may be synonymous) is at once a communal (community-based) and a deeply personal act of choosing to see things differently. Results are seldom instantaneously visible, but are instead the product of reflection and dialogue over time.

This seems highly descriptive of what occurs for individuals in action learning sets. There appears to be a period of time when, on the surface, nothing seems to be happening, but when in the creative psyches of perfectly ordinary human beings, the variety available in the learning set community is being richly reconfigured into new thought patterns and often new values. Before these manifest themselves in new actions and attitudes, the set may be said to exhibit *virtual latency* (Willis, 1979, p. 381): *virtual*, because the dynamics of the personal and interpersonal transitions are unseen, and having *latency* because productions of these unseen dynamics are still waiting in the wings. The concept of virtual latency in human creativity may have potential for explaining some of the lag in concrete results that executives may initially expect from action learning, and may help to encourage a longer term view of the development of boundaryless people and organizations.

Boundaryless: A Working Personal Definition

The exercise of psychological freedom within community is not solely an existential ideal, of course. It is also rooted in the human relations movement where the practicality of working in small groups in an atmosphere of mutual trust and honest communication has been demonstrated over and over. It is from these dual and overlapping kinds of source materials, as well as from our research on action learning sets themselves, that the following working definition of personal boundarylessness is derived. It is intended, as in the case of organizational boundarylessness, to be a general definition, applying to individuals in any life circumstance. It is also proffered as an artefact to facilitate further research and discussion in action learning. *A person becoming boundaryless* engages in

> the personal working out of open, authentic forms of risk-taking in egalitarian interactions that allow an individual to push out the boundaries of the self and realize new levels of psychological

freedom, awareness, insight, and ability to act constructively, while valuing similarities and differences with which others approach the same process.

Cultural uniqueness is certainly one aspect of the valued differences and similarities. This is often a critical piece of the action learning endeavor, as unfamiliar problems are addressed in unfamiliar settings by people who do not know each other. People who do not know each other can be working side by side, of course, since organizations do not necessarily seem like good places to be yourself.

A Bifurcating, Borderless, Chaotic World

Since wanting boundarylessness has risen to the level of suggesting a conscious organization development strategy (Askenis et al, 1995) as well as a conscious career development strategy (Arthur & Rosseau, 1996), it is fair to ask what the origins of these strategies might be. We have mentioned some of the antecedents in psychological and existential theories and belief systems. If strategies designed to achieve boundarylessness are further associated with a particular world view or a particular concurrence of social, economic, political, religious, scientific, and intellectual histories, we ought to learn about this. The alternative is that we may decide blindly *whether* to engender boundarylessness without also understanding *why we should or should not.*

We have sought global insights from representative writers in fields ostensibly far from each other: the branch of philosophy of science that is investigating evolutionary systems theory where Ervin Laszlo and Ilya Prigogine are dominant figures, and the economics of global competition as viewed by Kenichi Ohmae, who has been called Japan's only management guru (book jacket). Each may have made contributions to the current strategic emphasis on boundarylessness.

The alien language of chaos theory, a derivative of dynamical systems theory which Progogine's work in chemistry set in motion, has been creeping into management literature and organization parlance for well over a decade. It is now acceptable to speak of chaotic organizations as not necessarily behaving randomly, but instead responding to a new set of attractors that will launch them on new courses of action and establish new kinds of order. The task of management then becomes (in vastly oversimplified terms) to grow agile enough to catch the wave of change and then somehow get out in front of it in a reasonably logical, forecasting way. This, says Laszlo in *The Age of Bifurcation* (1991), is a sign of our new dependence on intelligence --rather than fight, flight, or camouflage --for our very existence.

He calls this reliance on intelligence a fateful gamble, for now our collective survival, and that of the whole biosphere hangs in the balance (p. 95). Laszlo is by no means sure that human intelligence has evolved sufficiently to choose forks in the road that will advance humanity and not lead to its destruction, but he thinks there is hope if qualitative, intensive development on the scale of entire human populations can occur (pp. 102-3). What he views as essential to this undertaking is a holistic alliance of science, art, religion, and education in a unitary process that would seek the cultivation of new forms of consciousness. (pp. 93-94). Bifurcation is now a common experience of all people regardless of their location on a global map. They have come to that turning point where their histories do not afford the means to predict their futures, as systems --nations and ethnic communities --move close to the threshold of their stability. They live dangerously in part because they are required in the passage of time and evolution to become more complex than they are ready to be. Laszlo considers this an unsustainable situation. He sees that we may yet gather our wits and act to bring about a global society that is integrated yet diversified, dynamic and complex, and organized on many levels, from the grass roots to the global. The alternative he sees is continuing on present course, to our own destruction.

Ohmae, in *The Borderless World* 1990) sees an interlinked economy sweeping across national boundaries to serve consumers who can travel and see what they want, or who can view a vast choice of products on the internet. In Ohmae's opinion, the new access to information creates global citizens whose awareness puts pressure on nations and companies to respond in boundaryless ways. He believes that, For managers, this flow of information puts a high premium on learning how to build the strategies and organizations capable of meeting the requirements of a borderless world. (p. 22).

According to at least one branch of the philosophy of science conversant with the new science of complexity, and according to at least one assessment of consumer boundarylessness, as sampled here, we are collectively and separately destabilized by bifurcations, without the comfort of historical precedents to guide us and without scouts who have been to the territory ahead of us and returned. There are no landmarks. This is not to say we have no recourse. Laszlo points us toward boundarylessness in developing new consciousness of our human interdependence. Ohmae has us recognizing that the whole world is everyone's uncarved-up marketplace. This is a

useful backdrop for envisioning ways in which action learning can help to develop the new consciousness of which Laszlo and the existentialists have spoken, as well as the new economic order that is already on its way.

Boundaryless: An Action Learning Set Definition

Throughout our ongoing study of critical incidents, now in its third year (Dilworth & Willis, 1997; Willis & Dilworth, 1998; Dilworth & Willis 1998; Willis, 1998) the unleashing of freedom to think and act is found to be characteristic of the action learning experience. Freedom has opened in two directions, upward toward potential behavior in the macro organizations and national-to-global entities set members will encounter, and downward into the heart of the set and the dynamics of change in persons. The freedom is intensely felt and finds its way into several additional domains in the data: personal growth, new insights, unprecedented learning, and finally into a category sufficiently distinct to be called boundarylessness.

There is high variability in action learning sets and in those who start them in motion. This is to be valued if for no other reason than the provision it makes for the airing of many opinions, surfacing tacit knowledge, and encountering of cultural assumptions so different that set members find a need to revisit their own. The presence of this variety precipitates the individual process of pushing out the boundaries of the self, encouraging new perspectives and new possibilities for action. On the other hand, an over-stressing from volatile interpersonal dynamics in high variability situations can cause retreat of participants (and in some cases retreat of their mentors) from the self-regulatory principles on which action learning is based. Boundary issues will surface, early or late. Examining how they are handled, by whom, might tell us as much about ourselves as set mentors as it does about the set. But this is research that is still to be done. What is intended here is merely to point out that the degree to which set members are allowed to experience *boundarylessness* may sometimes be constrained by a mentor's own discomfort with it.

The functioning of action learning sets does not occur in splendid isolation. In the real world of the real problem, perceptions of how much boundary-pushing the client organization is willing to absorb have their effect. If the organization clearly understands what boundarylessness entails and is prepared to capitalize on such liberation strategies, this raises the ante in favor of set engagement in personal and organizational boundary experiments. If set participants themselves understand and embrace the risks involved, and if set mentors in turn are able to deal squarely with potential negative fall-out in their own professional lives, then the odds dramatically increase that boundaryless ideation and behavior will be seen in set activity.

In the words of set members who provided us with critical incidents we have found support for defining boundarylessness in this particular way:

> Being boundaryless means feeling freedom; liberation; having accountability without burden. We care deeply about the problem, or about someone's behavior, but we don't own it.

Deeply embedded in this set-derived definition is an expressed positive value in crossing organizational and psychological boundaries at will. There is, however, an attending caution that it must be accomplished ethically, *without invading or usurping power belonging to others.*

The definition allows neither a cop-out on responsibility nor a subscription to the liberty of doing whatever one pleases. Obviously, these were sets working on the problems belonging to external client organizations, not on problems they themselves had brought to the table. A disclaimer of ownership of someone else's problem seems appropriate even in each one bring one kinds of sets, however.

Set members clearly understand that, in crossing boundaries (and perhaps oceans), they have evicted themselves from what they thought were relatively safe experts boxes and chosen to wander among others from whom they may learn and with whom they may find solutions. As one reported, Seven heads are better than one --if you can stand the seven! This stepping out from the enclosure of their own knowledge comes to them as a great relief. They feel liberated to learn, liberated to challenge assumptions and ask questions that never would have occurred to them before, and finally even the heavy burden of being found intelligent enough to pin down causes and solve arcane organizational mysteries all by themselves drops like a dead weight from their shoulders.

They also understand that boundarylessness has its costs: the down-playing of hard-won expertise and the relinquishing of cherished but no longer tenable beliefs being foremost among these. Set members talk about both gains and losses in boundary terms, as in these brief excerpts:

I definitely [and uncomfortably] stepped outside my boundaries at that point. I am a non-confrontational person by nature. I was proud of my set. I think there were quite a few of us that pushed our boundaries. If learning cannot take place in a vacuum, as one set member wrote later, then the need for boundary snapping must be inherent in all learning. Surely it may be accepted as a given in the challenging air of a self-regulated set.

Boundarylessness and Set Mentoring

Perhaps each of us has a different threshold of tolerance for boundary freedom and its costs, and this tolerance may vary internally under different kinds of duress. If lives depend on caution, we tend to be cautious. However, if we are able to view our lives as worth risking for some improvement in life quality or some vision of a greater good, then we will tend to devise ways to get over, under, or around our personal and professional Berlin Walls. Risking certainly implies that not everything we might wish for is actually within our own control.

There is always a danger in set mentoring that we will tend to predispose a set in one direction or another if we have not completely understood our own power and boundary needs. Revisiting records of one set recently, we remembered that set members had chosen to work without a mentor. Control of the process (non-stop for two weeks) and of the final presentation to the client resided entirely within the set. Though some had had misgivings about this complete autonomy, the set was notably successful. Again reviewing our data, we noticed that there was a relatively low volume of comments in the five sets studied about mentor influence, if any. There may be situational reasons for this. But the relatively low reliance on set mentors among these five sets is also a signal that the next generation of research may need to look more closely at how sets and mentors learn --for good or ill□ from each other.

Closing Remarks: What Boundarylessness Means to HRD

In the final analysis, what we see happening in sets and where we place ourselves on the continuum of high to low intervention in set activity become deeply entangled with larger questions that we may already be asking ourselves. Potential disconnects between structural freedom and psychological freedom are of concern far beyond the action learning set and its environment, for organizations claiming to be boundaryless are already among us and are likely to increase markedly in number over the next few decades. Serving such organizations may require that we confront for ourselves a series of difficult questions like the following:

Are we, ourselves, as firmly attached to the rewards of short-term results as we perceive our client organizations to be? Are we required to be, in order to serve the client? Do we look for evidence of subtle change in mental operations as readily as we do for visible change in performance? Do we look for and value boundarylessness?

What does boundarylessness mean to a world, a society, an individual? What does it mean to us as adult educators and HRD professionals? Can the general definitions and the set-derived definition cited above hold up well in other circumstances? Do these have implications for human development on a global scale or is boundaryless a localized, largely western phenomenon? We have sketched out only a handful of the possible lines of inquiry.

To what extent does a set mentor, working either pro bono or for pay, have an obligation to prepare organizations and individuals for boundaryless futures? Are there limits to boundarylessness, or should there be? What if, in jettisoning boundaries, we begin to jettison a sense of ourselves, or our ability to perform tasks efficiently?

In our fervent embrace of organizational change and continuous learning,do we really know what we are doing? If we are flying blind, how can we improve our vision? Perhaps our own engagement in action learning –as participants, not mentors – could help us there.

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Contextual Learning of Owner-Managers of Small, Successful Romanian Companies

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This study examines critical learning experiences of owner-managers of Romanian small private companies, which enabled them to lead successfully in the transition to a free market economy, in order to determine what triggered their learning, what strategies they used and what lessons they derived from their learning experiences. The lenses through which managers saw their world framed their critical incidents and learning experiences. The findings as well as their practical and theoretical implications are discussed.

Keywords: Managerial Learning, International, Informal and Incidental Learning

The decade of the 1990s brought dramatic political and economic changes to the countries of Central and Eastern Europe. As Child and Czegledy (1996) noted, "Since 1989 the area has been experiencing economic and political reforms of immense proportions. It has become a 'living laboratory' in organizational transformation within a context of profound institutional change" (p.167). After the collapse of these countries' former communist systems and centrally planned economies, a free market order is viewed as a quick and efficient way towards recovery. Shrader & Collins (1991) have also underlined that:

> Economic growth is bound to be slow unless there is an adequate supply of entrepreneurs looking for new ideas, and willing to take the risk of introducing them. Thus a private enterprise economy will be retarded if it has not enough businessmen, or if its businessmen are reluctant to take risks, whether because they cannot raise the capital, or because they are timid by nature, or because the differentials for risk taking are inadequate. (p. 66)

As most growth in this area is at present coming not from current or former state behemoths but from dynamic start-up firms (Anonymous, 1995a), the study of the ways owner-managers of these companies learn the skills necessary to lead their organizations is important. In the Romanian context, Anton, Danciu, and Mitu (1996) found that "the private sector proved it was capable of absorbing a large share of the labor force made available by public enterprises and of offering equal or even higher salaries to its employees. Private owners are an economic force that is proving to have better skills in administering their assets." (p. 72). A review of the current literature has revealed that insufficient attention has been given to the managerial concerns implied in the transition process to a free market economy in Romania (Nicolescu, 1992; Cseh, 1992). No evidence of managerial learning studies was found in this country. Thus, the problem addressed in this study is the lack of research in management learning in Romania, research which could shed light on ways in which managers learn with the potential of opening doors to the creation of a management development infrastructure.

According to Burgoyne and Reynolds (1997), "The learning part of management learning refers to both what is acquired and how this acquisition takes place, when individuals and social groupings acquire the ability to manage" (p. 5). Talking about the role of situated learning theory in management learning, Fox (1997) draws our attention to the fact that "formal management education and development are but the tip of a learning iceberg and that most learning to manage and managing to learn occurs 'on-the-job' in tacit, culturally embedded ways through people's work practices within organizations, groups, and other communities of practice" (p. 35). Wagner and Sternberg (1985) propose that tacit knowledge (knowledge that usually is not openly expressed or taught) plays an important role in intellectual competence in real-world pursuits. According to the authors tacit knowledge is a specific component of intelligent behavior that is important for occupational success, which is informal rather than formal and practical rather than academic. It is the tacit attributions, beliefs, and assumptions which make up the informal and incidental learning. As Stuart (1989) described, it is important to acknowledge that learning is taking place all of the time--even implicitly and haphazardly--as part of a manager's day-to-day work life and activities. Learning from experience, trial and error, social learning, self-directed learning were just a few of the modalities surfacing in the reviewed studies (Burgoyne & Hodgson, 1983; Lombardo, 1985; Zemke, 1985; Stuart, 1986; Akin, 1987; McCall, Lombardo, & Morrison, 1988; Dechant, 1989; Stuart, 1989; Marsick & Watkins, 1990; Verlander, 1992; Kops, 1993; Young, 1994; Burgoyne, 1995; Geppert, 1996; Simon & Davies, 1996; Soulsby & Clark, 1996).

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In the wake of all of the above evidence, the main assumption of this study was that Romanian owner-managers of private companies learn their jobs primarily through informal, incidental means. The theoretical framework of this study was therefore based on Marsick and Watkins (1990, 1997), Watkins and Marsick's (1992) seminal work on informal and incidental learning in the workplace. In their models, when learning takes place from experience, under non-routine conditions, people frame the situation they encounter by using their judgment based on their previous experiences and knowledge. In order to develop a strategy to deal with the situation, they assess the constraints and limitations of the context against the feasibility of each solution. Thus, the context is used to test possible solutions. Once a strategy or invention is formulated, people may need to learn how to produce that strategy. The implementation of the strategy leads to consequences which may be the intended ones or sometimes unintended ones. People then embed into their consciousness assumptions or generalizations about whether or not the strategy worked. Thus, out of the consequences, meaning is made of the experience and what is learned from the experience is retained. Marsick and Watkins' models were used as a point of reference for this study. This study was not designed to empirically test these models, but through thick description using a qualitative methodology, to elaborate on their components related to Triggers, Learning Strategies, and Lessons Learned.

Research Questions

The purpose of this study was to examine the critical learning experiences which enabled owner-managers of small private companies in Romania to lead successfully in the transition to a free market economy, to determine what triggered their learning, what strategies they used, and what lessons they learn. In order to attain the purpose of the study, the following research questions were investigated:

1. What triggered the owner-managers' engagement in the learning activity?
2. How do owner-managers of small Romanian private companies learn what they need to know to run their businesses successfully in the new free market economy?
3. What lessons do owner-managers derive from their learning experiences?

Methodology

In order to answer the three research questions of the study, information rich cases were collected through in-depth, face-to-face interviews with owner-managers of successful (on the top list of companies compiled by the Chamber of Commerce at county and country level) small (2-99 employees) Romanian private companies. The interviews were conducted by the researcher in Romania at the end of 1996 beginning of 1997. Managers were asked to describe at least three critical incidents from their managerial practice according to an interview guide which they received at the time they agreed to participate in the study. The interviews lasted between one and two hours and 72 critical incidents were generated.

Although 18 in-depth interviews were conducted, upon further study of the respondents against the sample selection criteria, 15 interviews were finally selected for this study. All but one of the managers interviewed were owners of their companies. In order to maintain confidentiality, the researcher assigned each of the managers participating in the study a numbered letter P1 to P18. These numbered letters were used by the researcher in the narrative and analysis of this study's findings. The 15 managers selected for this study were between 28 and 62 years of age. They were selected to represent both genders and the nationalities (Hungarian and Romanian) specific to the two regions represented. There were six ethnic Hungarians and nine Romanians, and four female managers selected in the sample. The managers were highly educated and obtained their degrees and certificates from Romania. All but three of the managers had a university degree and one of them had a doctorate degree.

Although this research study was conceptualized and reported in English, the data was gathered either in Romanian or Hungarian depending on the participant managers' mother tongue. The researcher transcribed verbatim all the recorded interviews and translated all but six of them. She is native Romanian of Hungarian nationality, speaking both languages at mother tongue level. She is multilingual and in the last fifteen years she has used English, which she learned in childhood, extensively in her work by translating, interpreting, and tutoring from English to Romanian and Hungarian, and vice-versa. Working with three translators, all knowledgeable of these languages and cultures, the validity of the translated materials was verified through back translations and re-translations of parts of the data. Although only small differences in the choice of words and translation of idioms

were noticed, the translators consulted on the issues and a decision was made on the best translation. Although it is impossible to achieve a word-for-word translation an attempt was made to keep the rendering as consistent as possible and still convey the meaning of the original message.

Content analysis with the sentence and paragraph as basic units of text were used in coding and analyzing the data of this study. The first step in the analysis was to clearly identify the critical incidents, the unit of analysis of the research. The second step was the coding of the data into categories. The researcher began the preliminary sorting of the data in the following three mutually exclusive categories: Triggers, Learning Strategies, and Lessons Learned. These categories were predetermined based on the study's theoretical framework. During this process a new category clearly emerged from the data. This category was called by the researcher Framing the Business Context and it was defined as the constraints and opportunities perceived by the managers in the context in which they operated. A total of 511 data strips were categorized in this way.

The third step in analyzing the data was the open coding of the data inside each of the categories to obtain specific themes through close examination of the data. As a result of this process, seven themes emerged under the Framing the Business Context category, Triggers and Learning Strategies each had six themes, and Lessons Learned had five themes. The four categories with their themes are presented in Figure 1.

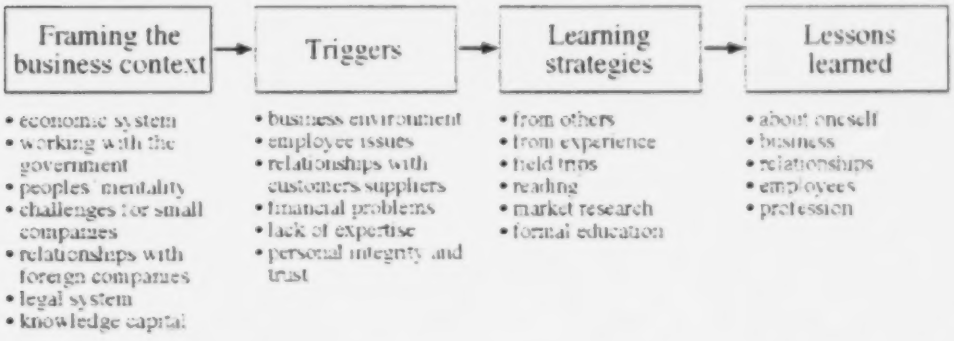

Figure 1. Contribution of the study to the theoretical framework

Both Weber (1985) and Miles and Huberman (1994) contend that the reliability of human coders should be assessed. Intercoder reliability is suggested to assess the extent to which content classification produces the same results when the same text is coded by more than one coder. This was accomplished in this study with the help of the researcher's major professor, a practitioner in the field, and a doctoral student whose valuable insights helped clarify the category definitions and opened new ways of looking at the themes.

Results and Conclusions

The learning of the owner-managers was stimulated mostly by the ambiguity of a quasi-market economy. This study sheds light on what a critical impetus to learn it is for owner-managers of small private companies when state and privately owned companies coexist in the same market, a market which was centrally planned and completely dominated by state-owned companies and institutions for over forty years in Romania and since 1990 it is slowly transforming into a free market environment. This specific, unprecedented transformation characterized by instability and uncertainty adds a new dimension to the complexity of learning by doing when even banks, suppliers, and border guards, to name just a few, are not predictable and shows that there is still a long way to a well defined market oriented environment. The findings of this research showed that the managers participating in this study learn mostly informally what they need to know in order to run their businesses and that courses offered by Western trainers, although interesting, were not valuable to them as the concepts were not embedded in the country's context.

The critical importance of the social, political and economic context to learning. The lenses through which managers saw their world framed their critical incidents and learning experiences. All the managers participating in this study gave detailed accounts of their perception of the economic, political and social context in

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which they worked and their learning experiences were all embedded in this context. The fact that 111 data strips represented by sentences or phrases emerged from the data as related to the managers' business context strengthens the argument that learning is embedded in the context of the learner and that triggers of learning are selected based on this framing of the business context. One of the most frequently mentioned themes of the seven themes which form this category, was framing the business context in terms of the economic system (no help from the banks, the impact of high inflation and high taxes, uncertainty and instability) followed by framing the business context in terms of working with the government and state-owned-companies (no help and support from government and problems in dealing with state-owned companies). P7 described this instability in the following way:

> Well, this is the cancer of the Romanian society - instability - you don't know what tomorrow will bring, you have no idea. Eh, you don't know what will happen tomorrow, I will die, my business will be taken away, another government will come that will do things differently. People are afraid. There is no such thing as security, stability as it is in developed countries where tomorrow will be like today or a little bit worse or a little bit better, but there is a stable environment. If I open a business I do it thinking that my son will have a chance to take over and hopefully his son will be also there, but here, here it is not possible. (p. 7)

The economic system and the government institutions in place offered very little support or sometimes even seemed to raise barriers in the way of the small private businesses. Speaking about the helplessness in front of all the barriers raised by the government to keep private companies at bay, P17 described how:

> You have moments when you just want to quit. When you run into so many obstacles and so many people are slowing you down even though you want to do something good, nobody wants to help you, quite to the contrary...You have people from urban development, from constructions, from telecommunications, and on, and on, all requiring signatures and they have a kind of envy thinking that you have money to build a factory and they don't have money to buy a car for example...I don't understand, is this the future? For a better society you ought to help people with initiative to do something. Why delay them? And unfortunately we all run into these things. (p. 11)

Framing the business context in terms of people's mentality (old [regime] mentality/business work ethic of employees, managers, and people in general) was another major theme derived from the managers' accounts. P10 described his problems caused by his employees' old mentality in the following way:

> I had to explain to my workers, that those times when you could take home a reel of thread, or anything else is over [referring to some habits in the old regime], and now if you take something, you take it from the private property of somebody. Unfortunately in the 'old times' people got used to that, nobody can deny that,...so people took home anything available just to supplement their income...But to change people's mentality is the hardest thing to do...Time and education is needed, just like the communist system developed in fifty years its own kind of people. I am not saying that fifty years are needed to change people but at least a minimum of twenty five years is needed to develop a new generation who can really live and work in a democratic society. (pp. 1-2)

Framing the business context in terms of challenges for small companies and their managers (lack of resources and market realities, the professional challenge) was another theme echoed in the managers' stories. The account of one of the managers from team P11 eloquently presented the challenges of some of the entrepreneurs in this unprecedented turbulent context in the following passage:

> In my opinion the biggest problem in this transitional period was that people needed to change profiles, to forget their old specialty and learn a new one. In fact, we also went through this. We had our specialty, probably it would still be our source of living if Ceausescu were alive, and we were forced to forget it and learn a new one plus the management part of it. I believe this is a big problem and everybody had to go through it. It's hard to explain it. In the past there were no unemployed people on paper, but there were inside the gates. They had no work at the workplace. They didn't do anything, because they didn't know or didn't want to. They got paid anyway. So, it was unemployment inside the gates. In these days it's getting harder and harder to do that. People

> are forced to change profiles, or in some cases to learn a totally new specialty. The transition is still going on. (pp. 7-8)

The managers perceived their context in its larger entity by emphasizing the whole political, economic, and social context in which they conducted their activities more than the internal context of their own organizations. Deriving from the managers' accounts of their context, this is understandable in an environment where rules and laws are continuously changing and where government institutions try to find their identity in a new order of things. The context was sometimes interpreted as a macro level trigger of critical incidents, as a barrier in finding solutions to their problem, or sometime as offering potential opportunities. Thus, the framing of the context emerged as a critical dimension in this study and permeated every phase of the learning process.

Enhancing the Meaning of Triggers of Learning, Learning Strategies, and Lessons Learned

The thick, rich descriptions of learning incidents offered by the studied owner-managers enhanced the meaning of these three components of the model. Ninety four triggers, the stimulus that initiates the managers' process of learning, were identified as presented in Figure 1. All of these triggers arose from specific contextual situations perceived as unsolvable at that time by the managers. From this point of view, the nature of these triggers is not different from that presented by Watkins and Marsick (1992) and Marsick and Watkins (1990, 1997). In several studies (Marsick and Watkins, 1990; Howe, 1991; Kops, 1993; Lessard, 1994; Villinger, 1996; Simon and Davies, 1996) triggers of learning were not specifically discussed as it was implied that learning experiences were embedded in the changing organizational context. In the few studies where triggers were analyzed (Akin, 1987; McCall, Lombardo and Morrison, 1988; Dechant, 1989; Mumford, 1993; Ellinger, 1997), they were mostly related to the internal context of the managers' organization (e.g. first supervisory job, new project/task force assignments, problem solving within a group, line-to-staff switching, starting from scratch, business mistakes, subordinate performance problems). Most of the triggers in this study were embedded in the external context of the managers' companies while only a few of them were related to the internal context of the company. Thus, this study expands on the findings of studies describing triggers of learning experiences in the literature.

One hundred seventy seven learning strategies, defined as the methods used by the owner-managers to go about learning to deal with their critical incident, were also identified as presented in Figure 1. The managers' learning strategies were informal and incidental in nature and expanded the findings regarding learning strategies in the literature by shedding light on some of the same strategies, but used in a context of radical political, economic and social change. One of the learning strategies frequently mentioned in the literature was learning from a mentor (Akin, 1987; McCall, Lombardo and Morrison, 1988; Lewis, 1995). This learning strategy was not mentioned at all by the managers in this study which might be explained by the unprecedented change in the environment in which these managers conduct their activities where everybody is trying to learn the new rules of the game amidst the old rules still in place.

The 129 lessons learned identified in this study, as presented in Figure 1, also expand on the findings in the literature. The managerial studies conducted in the United States and Western Europe addressed the issue that managers should continually adapt their strategies, tactics, systems and behaviors to remain effective in their changing environments. The assumption was that those managers already had not only the basic knowledge of how to run a business or a department in a market economy, but also managerial experience on which to rely in that economy. In this study that assumption did not hold as most of the managers started from "grass roots" and first had to learn the basics of conducting and organizing a business in a radically changed environment. Thus, the findings paint a different view of similar lessons as embedded in their context and, by this, expanding their meaning.

One of the major lessons learned by the owner-managers participating in this study was that although many changes took place since the collapse of the communist regime, little has been changed in the way human relationships in conducting businesses were governed. Thus, those managers who did not have managerial experience in the previous regime had to learn how to work with the government and state-owned companies while those who had previous experience did not have a chance to forget or unlearn previous practices. Managers also learned that it will take time until the mentality of the majority of people will change in order for them to understand the way a market economy evolves and works. It will take time until the new rules of the game will take over the old ones and new relationships between businesses and their customers and suppliers will be forged based on ethical principles.

Implications for Research and Practice

The findings of this research show that the managers participating in this study learn informally what they need to know in order to run their businesses and that courses offered by Western trainers, although interesting, were not valuable to them as the concepts were not embedded in the country's context. According to Nonaka and Takeuchi (1995), tacit knowledge deriving from close familiarity with the Central and Eastern European context could be of utmost value for Western partners who lack this familiarity and sureness of touch, yet it could easily be unrecognized or dismissed as inappropriate by those who assume that their competence is necessarily superior. For global human resource development practitioners the findings of this study show how critical it is to invest the time in understanding the historical, political and social dimensions of the country in which the interventions will take place. The learning accounts of managers in this study also shed light on ways of learning when few resources (e.g. financial, technological, educational) are available to support learning. Thus, this study may help practitioners faced with tight resources craft innovative ways to learn and develop training and development programs.

The findings of this study extend Marsick and Watkins (1990, 1997) and Watkins and Marsick's (1992) theoretical framework and model of informal and incidental learning in the workplace. As the authors' framework and model was developed based on empirical research in the United States and Western Europe, which enjoy political and social stability and, in spite of globalization, a relatively stable economy, it did not include the learning models of managers living and working in a volatile political and economic environment. The managers' learning studied in United States and Western Europe was based on already established professionals working in well-defined organizational structures and corporate cultures. The owner-managers in this study and their organizations, the newly-founded small companies in Romania, are witnessing an incubation period when the organizations' structures and culture are developed by trial and error in the same time as the managers' profession is established. This context as well as the owner-manager group which was not represented in the studies on which the model was built contributed to the extension of the model.

During the data analysis process it also became apparent that the language used in Marsick and Watkins guiding models (1990, 1997) was too abstract or parsimonious compared to the language used by the participants in this study. Although this study added thick description to the three components related to triggers of learning, learning strategies, and lessons learned, the question of what is not captured in the models seems worthwhile to explore. Thus, an empirically grounded re-conceptualization of the models into a model which incorporates the learning process as people in this study described them is recommended and it is addressed in another paper.

The learning models of managers operating under the volatile environment of the countries in Central and Eastern Europe deserve further exploration. Global human resource developers can determine how to offer innovative approaches to learning and to create a learning infrastructure to serve the population of managers in this region from studies such as this one. Additional studies addressing how managers learn in companies with different ownership patterns, and the relationship between the learning styles of these managers and the nature of their learning would extend this study. Nevertheless, the portraits given here of the learning of managers facing turbulent change, and a level of constant chaos, chart new territory for management development.

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Are Careers What They Used To Be: A Factor Analysis Of Schein's Career Orientations Inventory

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This study provided a statistical analysis of Schein's 40 item Career Anchor Orientation Inventory Tool. Participants were randomly selected and data collection accomplished by mailed survey (n = 268). Eight reliable factors were identified that closely matched the eight factors identified by Schein as career anchors. Eigen values were all greater than 1 and reliability testing, using Cronbach alpha was good. Overall, Schein's tool was found to be statistically reliable and valid to, in part, determine career anchors.

Keywords: Career Anchors, Career Orientation Inventory, Evaluation

Career development has been identified as a life-long process, which involves the development of attitudes, values and capabilities that lead to future occupational choice (Super, 1990). Today, there are profound changes occurring in the workplace and within organizations worldwide. "These changes in the occupational environment have implications for career development in the future" (Schein, 1996, p. 80). Everyone who works is experiencing changes never imagined. Technological advances and globalization are but two major factors that have revolutionized the workplace. Recent changes have introduced a whole new vocabulary to describe and define what is taking place in the workplace. Activities and business initiatives such as rightsizing, downsizing, job sharing, downshifting, re-engineering and the virtual office are commonplace. As adults mature, a major consideration involves the changes in self-concept and identity when the individual faces marriage, parenthood, career advancement, decline, retirement, illness and widowhood. Factors such as age, gender, race, personal characteristics and economic condition influence the extent to which various life roles are fulfilled, and the recognition of the interconnectedness of these life roles has begun to change the nature of career and life planning.

While individuals have always been focused on career development, the past ten years has seen a major shift in the way that people view their careers, with increasing emphasis on an interconnectedness between their personal values, their work life and career goals. Many organizations are scaling back or eliminating their career planning and development activities as a way to cut costs, and expecting the individual to take on more of the responsibility for career management. A frequently cited condition in today's workplace is that no employment is constant, and organizations, as well as individuals, must be always ready to meet the changing needs of today's work culture. With less career support from organizations, self-assessment vehicles are vital to helping individuals understand their relationship with their careers, organizations and personal commitments.

One means for framing career development is through the use of Schein's Career Anchor Instrument (1990). The career anchor concept is based on developmental principles of career choice. Schein asserts that as an individual progresses through the developmental stages of a career and enters the establishment state, which is generally after 10 years of working life, one develops a clear occupational self-concept. Schein labels this occupational self-concept as a "career anchor." It is composed of the self-perceived talents, motives and values of the individual and:

> ... embraces some explicit answers to the questions:1) What are my talents, skills, areas of competence?; What are my strengths and what are my weaknesses?; 2) What are my main motives, drives, goals in life? What am I after?; 3) What are my values, the main criteria by which I judge what I am doing, whether I am in the right kind of organization or job, how good I feel about what I am doing? (Schein, 1982, p. 8).

Once an individual clearly recognizes these talents, motives and values, the need for congruence makes one seek consistency and integration among the different elements until a complete self-image is realized (Schein, 1982).

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While the individual's occupational self-concept matures, it begins to function as a guide in career decision-making as it drives, constrains, or stabilizes the person in making career choices, thus, the anchor metaphor (Schein, 1978).

Problem Statement

Overall, the importance of understanding the way individuals view their careers is increasing, but research in the area of careers has not kept pace with, and has even been hindered by, the rapid changes in the workplace. Much of the early discussion of careers dealt with the concept of fit between such things as the individual's skills, personalities and abilities and those required by the job or environment/organization (Holland, 1985; Parsons, 1909; Williamson, 1965). However, the work environment is changing so rapidly that these conceptualizations may not well represent contemporary career development.

Specifically, career counselors have incorporated use of Schein's career anchor instrument career anchors, into their practice of advising individuals and organizations as they address individual career goals and organizational employment needs. Unfortunately, while Schein's Career Orientations Inventory is widely used as a self-assessment tool, little research has been done to validate that instrument. Thus, there is little empirical evidence to draw on to help people make these decisions, a problem exacerbated by the sweeping changes in the workplace over the 15-20 years since Schein's initial work, and subsequent follow-up studies were completed. Thus, the problem to be addressed is whether the constructs represented by the career anchors inventory are valid and reliable.

Research Question

Is the Career Anchors Orientation Inventory Scale, developed by Schein, a valid and reliable tool to determine the career anchor for particular individual's within a selected sample and population?

Theoretical Framework

The multidimensional approach to career development took shape as researchers incorporated the broader dimensions of personality variables with developmental theory. Particularly important was the multidimensional approach to careers evidenced in the work of Super (1957). It is commonly accepted that Super's developmental self-concept theory of vocational behavior has been credited as uniquely successful in integrating the occupational psychology approach with the evolutionary process approach of developmental career psychology.

Flowing from the work of Super, other researchers have adopted a multidimensional approach to career development which extends career development theory to include later career stages and new relationships. Schein devised an integrated approach to career development using a description of nine career stages (Schein, 1975, 1978, 1980, 1982, 1987, 1990). These are an adaptation and elaboration of the career stages introduced in the seminal work by Super. The nine stages are: (1) growth, fantasy, exploration; (2) education and training; (3) entry into the world of work; (4) basic training, socialization; (5) gaining membership; (6) gaining of tenure, permanent membership, mid-career crisis, reassessment; (7) maintaining momentum, regaining it or leveling off; (8) disengagement and (9) retirement. Career stages 4, 5 and 6 are seen to be of particular interest to the study of career development as they relate to the organization and the individual. It is during these stages, which are generally characterized by an individual's establishment in the organization, that a person develops an occupational self-concept which has been termed by Schein as a "career anchor" (1975).

As an integrated model of career choice, the career anchor concept is considered unique in that it represents a synthesis of an individual's self-image and work experience. Concerning this uniqueness, Schein (1978) emphasized five central factors, which are inherent to the career anchor concept. The career anchor concept is:

1. Broader than the concept of job value or motivation because it accounts for the individual's self-perceived abilities and talents based on actual work experience and the individual's motives/values.
2. Not possible to predict from tests because the emphasis is on actual work experience that allows for the evolution, development and discovery of individual career anchors.
3. A gradual integration of values, motives, and abilities into the person's total self-concept.
4. Only discovered over a number of years during the early career when real-life situations indicate how the person's abilities, values and motives interact with and fit the career options available.

5. Identified with a growing area of personal stability without implying that the individual ceases to grow or change in other areas.

These career anchors describe how the individual views his/her career. The original study that formed the basis of the career anchor concept was a longitudinal study reported by Schein (1974). That research project was conducted to gain a better understanding of how managerial careers evolved, and how managers were socialized into the work setting. Subjects were 44 male graduates from the Sloan School of Management, who were monitored via periodic interviews over a 10-12 year time span. Although the job histories of the alumni differed, there was a high degree of consistency in the reasons given for their individual career decisions. On the basis of this consistency in career decisions, the following five career anchors were identified: managerial competence; technical/functional competence; organizational security; creativity (entrepreneurial); and autonomy. In a final report on this study, Schein stated that "careers are motivated in different ways and organizations must consider these differences in planning career development" (1975, p. 1). Because of the demonstrated stability in the participants' career anchors, Schein (1978) posited that career anchors would become increasingly stable over time. Over time and with further research, such as that performed by Applin (1982) and Burnstine (1982), who identified lifestyle as a potential career anchor, the original five career anchors have been expanded into eight classifications which now include, in addition to the first five: service, pure challenge and lifestyle (Schein, 1990, 1992). To date, Schein's career anchors have been utilized with many diverse populations including federal managers (Barth, 1993), teachers (Delong 1982), and certified public accountants (Hardin, 1995).

Methodology

This study tested the reliability and validity of Schein's Career Anchor Orientations Inventory instrument scale. This scale is the first part of the process that Schein describes to determine an individual's career anchor. A tentative career anchor can be identified by using the inventory scale alone, but must also be compared with the findings in the other steps in the process to determine an individual's true career anchor. While the original concept of the career anchor was developed based on individuals in the business administration field, subsequent refinement of the concept was achieved by studying subjects from a variety of career fields. The sample subjects for this study were drawn from a randomly selected group of nurses who had 10 or more years of work experience and, according to Schein, should have developed a sense of their career anchors. Nurses were selected as a convenience sample. Further, this population was selected to see if their career anchor selection had remained constant in the 1990's when compared with what had been described earlier in the 1980's. The participants were mailed a survey which contained: (1) a demographic survey, (2) a short answer questionnaire focused on career choices and preferences based on Schein's interview format; (3) Schein's Career Orientations Inventory (40 questions organized around a six-point Likert scale), and (4) a career anchor description list for the subjects to prioritize, based on the individual's personal perception of job importance. There was an overall return rate of 60.2% (271 surveys), and of those 268 (59.6%) were usable.

Questions on Schein's Career Orientations Inventory scale were answered based on a six-point Likert scale. Respondents were asked to indicate how "true" each item was for them personally using this scale. A "1" corresponded to the statement never being true for them, while a "6" indicated the statement was always true for them. Following the information provided by Schein (1990), after the 40 items were answered, individuals were then asked to go back over their answers and to circle three of the items which they had awarded the highest point value, and which they deemed were the most applicable to themselves. These three items were then weighted by assigning them four additional points on the coding sheet. Using the scoring sheet provided, the column with the highest point value initially indicated the individual's potential career anchor.

To provide additional insight and understanding of career development in the 1990's respondents were also asked to complete several short answer questions. These questions were designed to correspond very closely to the developmental questions provided by Schein in his Career Anchors publication. Participants completed questions related to career goals, demographic characteristics, and general information regarding the career anchor concept. These answers were analyzed qualitatively after the factor analysis had been completed.

Because the Career Orientation Inventory has had limited validation, a factor analysis with varimax rotation, and a reliability analysis using Cronbach's alpha as a model of internal consistency were also performed on the data. The statistical analysis was performed using the computer statistical package SPSS.

Results, Conclusions and Limitations

Eleven factors were identified, but only eight had high eigenvalues. Questions loaded on six factors that corresponded very closely with the questions that Schein identified for six of the career anchors, with moderate to high factor loading. Questions also loaded on another 2 factors, which closely reflected Schein's structure. The rotation converged in 10 iterations. Tables 1 and 2 display the career anchor structure, associated questions and absolute value scores.

Table 1 Confirmed Career Anchors Using Schein's Structure

Factor 1	*Eigenvalue 5.295*	*Absolute Value Score*
Autonomy	Question 3	.549
	Question 11	.673
	Question 19	.699
	Question 27	.771
	Question 35	.570
Factor 2	*Eigenvalue 3.617*	
Challenge	Question 7	.667
	Question 15	.736
	Question 23	.711
	Question 31	.632
	Question 39	.508
Factor 3	*Eigenvalue 3.038*	
General Manager	Question 2	.400
	Question 10	.620
	Question 18	.820
	Question 26	.659
	Question 34	.701
Factor 4	*Eigenvalue 2.670*	
Lifestyle	Question 8	.619
	Question 16	.631
	Question 24	.666
	Question 32	.505
	Question 40	.471
Factor 5	*Eigenvalue 2.306*	
Security	Question 4	.500
	Question 12	.501
	Question 20	.707
	Question 28	.641
	Question 36	.627
Factor 6	*Eigenvalue 1.972*	
Service	Question 6	.434
	Question 14	.588
	Question 22	.686
	Question 30	.675
	Question 38	.664
Factor 7	*Eigenvalue 1.713*	
Technical	Question 1	.436
	Question 9	.528
	Question 17	.516
	Question 33	.357
Factor 8	*Eigenvalue 1.527*	
Entrepreneurial	Question 5	.707
	Question 13	.764
	Question 37	.835

Table 2 Other Identified Factors

			Questions are identified by Schein as related to the following career anchors
Factor 9	Question 21	.437	Entrepreneurial
Eigenvalue 1.317	Question 29	.434	Entrepreneurial
Factor 10	Question 6	.405	Service
Eigenvalue 1.051	Question 30	.339	Service
Factor 11	Question 25	.644	Technical/Functional
Eigenvalue 1.000	Question 34	.308	General Manager
	Question 40	.309	Lifestyle

Factor seven, which corresponded to the technical/functional career anchor, only moderately loaded on four of the five questions, and factor eight (entrepreneurial) loaded high on only three of the five questions. The other two questions, (#21 and 29) identified by Schein as relating to the entrepreneurial career anchor, also loaded on the factors related to autonomy and challenge career anchors. In addition, those two questions identified a separate factor (factor #9). The other two factors (#10 and #11) identified very weak or weak factor loadings, except for Question 25 (.644). The eigenvalues, which refers to the ability of all the questions in a particular factor to better explain the construct instead of a single item, were all above 1 which is the accepted value to demonstrate the contribution of the factor to the total communality (Ferguson, 1981). Due to low eigenvalues and low factor loading, factors 9, 10 and 11 were not considered in this study. The results are displayed in Table 2.

As a check for internal consistency and reliability a Cronbach Alpha was performed. This is the most appropriate type of reliability for survey research when there is a range of possible answers for each item (McMillan and Schumacher, 1997). Results of the reliability assessment are summarized in Table 3, and were very consistent with an earlier study done by Hardin (1995) that looked at certified public accountants. Technical/Functional career anchor scale has a moderate reliability coefficient while the other scales have a high degree of reliability. In summary, the factor structure for this data is very similar to Schein's (1990), and the reliability is good and acceptable.

Table 3 Internal Consistency Reliability Test Results

Career Anchors	Coefficient Alpha
Technical/Functional	.5297
General Managerial	.7589
Autonomy	.8009
Security	.7251
Entrepreneurial	.7788
Service	.7428
Challenge	.7989
Lifestyle	.7323

Thus, it was determined that the Career Orientation Inventory could be utilized with confidence as there was a good degree of consistency, and meaningfulness of design with Schein's overall factor structure for the eight career anchors. Even though the entrepreneurial career anchor had only three questions loaded within that factor, the loading was very high. There was also a high degree of reliability on seven of the eight career anchors, and moderately high on the other career anchor.

While factorial invariance was not completely achieved, the overall factor structure of Schein's instrument was proven to be sound. Perhaps the inability to achieve closer factorial statistics could in part be attributable to the difference in populations as well as the fact that this is a constantly evolving and changing environment. All eight career anchors were found to have reliable internal consistency. Overall, Schein's Career Anchor Orientations Inventory is statistically a fairly reliable and valid tool to determine career anchors.

However, the changes in the workplace, and in language usage would seem to have an impact on the individual's ability to complete the inventory, and a concern with specific terminology is noted. Many of the terms used in the inventory, or to describe the career anchors for prioritization, are emotionally charged words which seem to elicit a response which may not be consistent with the original intention of the intended item. The items from the short answer responses indicated that the verbiage used to describe the career anchors might have an impact on the individual's choice of answer more than the actual concept behind the description. An example of this difference follows: in today's work environment, the terms "flexibility" and "risk-taking" are considered more desirable attributes than they were in the 1980's. Also, certain words seem to have taken on new meanings in that words such as empowerment, risk-taking, innovation and other highly charged words are used during motivational speeches, and appear on slogans or performance appraisals. All of these terms tend to provoke a response that may not be in keeping with the career-related concept intended. Some of the possible distortion may be due to an organizational or ethic cultural interpretation, a change in the contemporary use of a word, or a change in today's workplace perspective. Another consideration is that the wording on the questions, in particular #33 which refers to using your skills in your job, may be too general for today's specializations. In today's workplace, all individuals are required to have some type of technical competence in order to do their jobs, and thus should perhaps be accounted for in the Schein Career Anchor instrument.

This study furthered the developmental theory of careers by confirming the existence of career anchors, as well as providing additional evidence of construct validity and reliability for the Career Anchor Orientation Inventory established by Schein (1990). While this study confirmed the career anchor construct, there is still much room for speculation and controversy surrounding the construct and in particular the lifestyle career anchor. The findings from this study support the existence of the lifestyle anchor. They also suggest that the instrument can continue to be used, with caution, as people formulate their careers in the late 1990s.

That, within this population, the lifestyle was the predominate anchor supports the increased interest and emphasis in the literature on integration of life and workplace values. The respondents, who identified very strongly with their organizational culture, clearly articulated the importance of family and revealed a strong concern with the meeting the needs of the family while maintaining careers. Most surprising was the interest and value individuals gave to a "higher being" in determining the value in their lives, and assessing which career choices would be best for themselves and their families.

It should be noted that the results of this study are limited due to the specific pool from which the subjects were drawn (the Navy and nurses) and their voluntary participation in a survey process. Further, while the concept of the career anchor is firmly established in the HRD field, the factor structure for the Career Orientation Inventory has not been widely tested.

How This Research Contributes to New Knowledge in HRD

Career decisions and planning, while ultimately the responsibility of the individuals involved, have become a significant function of HRD professionals, and the organizations they serve. This increased emphasis is due, in large part, to downsizing efforts and associated job placement counseling/services, and job reengineering. Part of the process that HRD professionals employ is self-assessment. This is a critical component of career strategies that is geared toward professional self-fulfillment. Over 16 years ago, Yankelovich (1981) stated that "new-value" workers search for self-fulfillment in their work, rather than simply working for pay. This study of career anchors, which is based on an individual's self-assessment of their values, skills and goals, further describes and defines "worker" characteristics. This study demonstrates that the career anchor concept appears to be a tool which HRD professionals can use to guide individuals in learning more about themselves, and lead organizations to better utilize and understand their employee assets.

Career planning and development of the individual are key factors in HRD functions. The ability to integrate the individual's needs, values, talents and self-awareness into the requirements and structure of an organization is the work of the HRD professional in order to develop the maximum potential of the individual while seeing to the greatest functionality of the organization. The identification of an individual's occupational self-concept, the career anchor, is an effective career strategy that can facilitate enlightened career decision-making and planning for career development in keeping with the interests of the individual and the organization.

From an individual perspective, and in conjunction with HRD professionals and researchers, a career can not be managed effectively if an individual does not know his or her needs, biases, or motives (Schein, 1990). Individuals seeking employment must decide what type of career to pursue and the type of setting in which to work (Dilon and White, 1988). Each employee should perform a self-appraisal and evaluation of themselves in terms of their

perceptions about careers. This should contain a systematic approach to data collection and analysis so that the individual has a clear understanding of their needs with respect to their career (Hodgetts and Kroeck, 1992). The career anchor assessment tool can be a vital part of this process. This tool offers the individual the ability to identify what values, skills and abilities are most important to them. While not a panacea for career choice and all career decision, it offers a useful approach from which the individual can evaluate career choices in terms of core professional identity through the career anchor, and in so doing enhance organization and individual job harmony.

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The views expressed in this article are those of the author and do not necessarily reflect the official policy or position of the Department of the Navy, Department of Defense, nor the U.S. Government.

Women's Professional Organizations: Their Potential Role in Women's Careers

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The purpose of this exploratory qualitative study was to investigate the potential role for women's professional organizations in women's career development and advancement. Sixteen women in leadership positions in diverse career fields, organizations, and career stages participated in the research. Five potential career benefits were described as occurring on the individual and interpersonal levels: self-esteem, skills, support, networking, and giving back. These benefits were obtained over the long-run from active participation in professional organizations.

Keywords: Woment's Professional Development, Professional Organizations

Women began to enter the U.S. workforce in significant numbers in the 1960s and 1970s. However, recent data tell us that women are not succeeding to the most senior levels in organizations to the same degree as men. Although women represent 46% of the U.S. workforce and 40% of all management and supervisory positions, they represent less than 5% of senior management. Extensive research has focused on the causes of this low representation and on potential solutions. Morrison and Von Glinow (1990) proposed that the differences resulted from gender differences, gender discrimination, or structural systemic discrimination.

If developmental opportunities for women within their work organizations are limited, then perhaps external activities should also be considered as possible avenues for developmental opportunities. Professional organizations are prevalent, and have been identified as possible sources of external visibility, competence acquisition, mentors and role models (Rusaw, 1995), which are associated with women's career advancement. Anecdotal information suggests that women's professional organizations provide unique developmental opportunities. In Adams' (1979) study of 60 professional women, the participants indicated that women's profession organizations enabled them to find others who live with the same pressure, to better evaluate where they were in their careers, to get emotional support, to balance the isolation of work, and to find mentors and sponsorship.

Professional organizations have been found to be a common factor in the career histories of women in management or leadership positions (Bruegman, 1995; Rusaw, 1989). To the extent that professional organizations are a reflection of the profession, gender issues present in the professional work context may also be present in professional organizations. Perhaps this is why more than 500 women's professional organizations have been established since 1980. The Business Women's Network Directory lists 900 professional women's organizations--either national or local--that individuals can join.

Statement of the Problem and Research Questions

The need for strategies to promote women into and through the ranks of management is well established. To date, the strategies that have been examined are internal to the work organizations. It has been generally assumed that professional organizations are beneficial to one's career and there is some evidence that career development can occur in external professional organizations (e.g., Bruegman, 1995; Rusaw, 1989). Though internal single gender organizations have been proposed as one remedy (Catalyst, 1991), external single gender organizations have not been specifically addressed in research addressing the career needs of women.

The purpose of this study was to investigate the potential role for women's professional organizations in women's careers and in their advancement--into and through the ranks of management. There are a significant number of women's professional organizations: some are membership organizations, some might be classified as learning communities, some are based on professional areas of expertise (e.g., information technology), some are based on functional role, etc. There have been very few studies of professional organizations and the research that has been conducted has been from the perspective of the organization and its role in staff development programs and in encouraging non-traditional careers for women. However, there has been no study of women's professional organizations and their career development contribution using the lens of women's career development theories as a base for study.

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This study focused on professional women who achieved leadership positions in their careers and who have participated in women's professional organizations. The study sought to understand the benefits of participation and how participation contributed to their careers. Since women do not appear to be getting the development they need to progress into management, the question that is addressed is: What role can single gender mechanisms, such as women's professional organizations, play in women's career development and advancement? Specifically, what benefits accrue to women who participate in professional women's organizations that are of relevance to their careers and to their development and advancement?

This study is important because it investigates a previously unresearched strategy for contributing to women advancing into and through management. This study is an exploratory qualitative study designed to begin to understand a phenomenon not previously researched. This study assumes that career advancement means promotion, as to a higher rank or level, and/or progress or furtherance in one's career, as in additional responsibilities; career development means career growth, building up, becoming better (often career development is associated with skills building and gaining competence, either through training and education or specific assignments); and a professional organization is an entity whose goals are the furtherance of its members' profession(s) and the advancement of their professional interests (often termed "association" or "society").

Theoretical Framework

Career theory research has been identified as career development, career advancement, career paths, career success, career strategies, career achievement, career choices, career psychology, paths to power and upward mobility, to name a few. Of all these variations, career development seems to be the most general term for addressing the progress of one's career, with positional advancement, increased title, or additional responsibility as the measure of one's progress. Numerous studies have found differences in the careers of men and women (Adams, 1979; Larwood & Gattiker, 1987; Ohlott, Ruderman, & McCauley, 1994). Morrison, White and Van Velsor (1987) identified five organizational experiences and conditions associated with the demonstrated career progress of women: support and encouragement, training and development opportunities, feeling accepted, challenging and visible job assignments, and an absence of tension. Burke and McKeen (1995) examined the relationship between the work experiences identified by Morrison and the career success of managerial and professional women. They found that women who received more training and development, received more support and encouragement, felt more accepted, and were given more visible challenging work assignments were more satisfied, involved and successful in their careers.

Recent models of career development that have specifically focused on women's career development and advancement have taken a systems approach. The models contain multiple variables and address both person and situation explanations. These models of career development do not accept the traditional assumption that one's career is continuous and the authors incorporate non-work personal variables (e.g., marital status, parental status) as components necessary to understand women's careers. Research suggests that women interweave work and family in a way that men do not (Fitzgerald, Fassinger, & Betz, 1997) and have different views of occupational achievement and the balance of work and family. Certainly there is a proliferation of career development theories being applied to women today, with no consensus on the variables.

Ragins and Sundstrom (1989) focused on the career paths to power, which have implications for advancement. Morrison (1992), building on her earlier work, proposed a framework for career development that includes three elements: challenge, recognition and support. Tharenou and Conroy (1994) evaluated the relative importance of situation-centered variables and person-centered variables in women's advancement. Tharenou, Latimer and Conroy (1994) evaluated the relative importance of situational and individual influences in women's and men's managerial advancement and found that separate models for women and men were more explanatory--male hierarchy and home status contributed negatively to self-confidence, career encouragement, work experience, and training and development for women, while contributing positively for men.

Two areas frequently mentioned in women's career advancement are mentoring and self-confidence. Research has repeatedly shown the importance of mentors and sponsorship to career advancement. Mentors can often be role models, but for women this becomes problematic when there are no women in senior positions to be mentors. Role models are most effective when they are personally relevant to the observer. Likewise, cross-gender mentoring relationships have been found to create problems. The notion of one-on-one mentoring relationships was expanded to also include peer relationships (Kram & Isabella, 1985). Peer relationships were found to fulfill both career enhancing and psychosocial functions.

Self-confidence is mentioned often in connection with women's career development. When addressing the development of women managers, Burrow (1978) found that the principal development needs of women were self-

confident attitudes, education to expand general management skills, and the opportunities to develop management skills. Self-confident attitudes encompassed self-awareness, self-image, confidence, assertiveness and leadership. Burrow's survey found that women had more affiliation needs and less opportunity to satisfy them. The isolation of being a woman in a male-dominated environment often creates uncertainty over one's self-esteem. Bruegman (1995) found that the internal factors of self-confidence, values, and communication were the major influences affecting women's career advancement and that women continue to struggle with self-confidence. Self-esteem appears to be more strongly related to achievement motivation for females than males (Betz & Fitzgerald, 1987).

The dynamics in affinity groups are different from those in heterogeneous group settings. Homogeneous groups have been shown to have more cohesion, trust, satisfaction, security, and freedom. Cohesion is particularly fostered in homogeneous groups. Attitude similarity is positively reinforcing and evokes a positive affective response (liking). Homogeneous groups are assumed to have more attitude similarity, which increases the satisfaction and trust among the group members. Women's groups have been shown to enable intimacy among women, lessening the tendency toward competition. This kind of sisterhood enhanced bonding in the group and increased a sense of responsibility among members, which facilitated disclosure and honesty. Women have been shown to self-disclose more to women than to men.

A strong case has been made for providing single-gender environments for learning, i.e., a safe environment for women to discuss and address gender-related issues in the workplace. Single-gender leadership development programs have been shown to have unique benefits including: reducing isolation, building support groups and networks, and confirming that differences can be assets. Participants can experiment with new ideas, skills, and behaviors in a less threatening environment and build their individual strengths without having to represent all women.

Methodology

Research participants were drawn from a women's leadership organization that "recognizes, educates and connects accomplished and diverse women to increase their individual and collective impact globally." All program participants held leadership positions in their work organizations or their community and all have college degrees (43% have masters degrees and 22% have doctorates). The 16 research participants had considerable diversity in profession (4 in management, 4 entrepreneurs, 7 executives, and 1 attorney), organization type (8 in corporations, 4 in small businesses, 2 in education, 1 in nonprofit, and 1 in a partnership), organization size (4 in organizations with less than 10 employees, 2 in organizations with 250-500 employees, 6 in organizations with 1,000-10,000 employees, and 4 in organizations with 50,000 or more employees), female representation in management (8 in organizations with less than 15% and 8 in organizations with 15% or more), and age (1 in the 20-34 range, 8 in the 35-49 range, and 7 in the 50 and over range). Demographically, 63% are married and 37% are single or divorced; 64% have children and 36% have no children. Of the nine with children, two had a break in their career to spend time with their families. From a career perspective, 75% have been in the same career field continuously while 25% have changed career fields; in addition, 63% have had one or few employers while 37% have had several employers. Of the four research participants who are in small businesses, three participants spent part of their careers in corporations; thus 11 of the 16 research participants spent part of their careers in corporate work environments. The study participants come from multiple organizations (16) in different industries (13) with multiple functional disciplines (13). Professional organization participation also varied, ranging from 1 to 8 organizations and 1 to 28 years of participation in each. In summary, the research participants represent a broad range of experience and situations.

Three methods of data collection were used in this study: in-depth interviews, document review, and questionnaires. The screening questionnaire was sent to 115 individuals, with a 48% (n=55) response rate, of which 44 volunteered to be interviewed. Literature suggests that individuals work on different developmental tasks at different ages and career stages (Hudson, 1991; Levinson, 1996). Three career age groups were identified as the most likely to represent individuals in early (20-34), middle (35-49) and late (50+) career stages. The interviewees were initially selected based on career stage and demographic group. After the first several interviews, it became apparent that the interview was much richer if the interviewee had significant participation in multiple professional organizations. Therefore significant participation in multiple professional organizations became an additional selection criterion. Two of the three non-white participants canceled their interviews and the remaining non-white volunteers did not have significant professional organization participation; thus the final group of research participants did not have significant ethnic diversity.

Two interviews were conducted with each interviewee: the first served as the primary data collection interview and the second as a confirmatory interview. General exploratory questions based on existing literature in women's career theories were used for the first interview with three areas addressed: work environment, career progression and professional organization participation. Prior to scheduling the second interview, a copy of the transcript from the first interview and a listing of preliminary findings were sent to each participant. The second interview was used to confirm the researcher's interpretation of the first interview as well as provide the interviewee with an opportunity to elaborate on her original statements. The preliminary findings were reviewed with each interviewee for the purpose of identifying relevant areas that may not have surfaced in the first interview. The in-depth semi-structured interviews lasted 1.5 to 2 hours in total for each interviewee for both interviews.

The second data source was information from or about professional organizations. A total of 68 professional organizations were contacted: 35 mixed gender and 33 women's. Of these, 32 professional organizations (21 mixed gender and 11 women's) responded. Additional information was obtained from professional organization directories and Internet web sites. The organizations that were not professional organizations were excluded from the analysis. A final set of 46 professional organizations (27 mixed gender and 19 women's) were included in the analysis. The third data source was information on the screening questionnaires: reasons for participation in the leadership development program, benefits of participation, and how the participant's experience differed from expectations. In addition, the respondents identified the mixed gender and women's professional organizations in which they participated and the extent of their participation.

The transcribed interviews, the professional organization documents and the data from the questionnaires were content analyzed for common career development topics. These topics were then grouped by category and organized around themes to understand the role for women's professional organizations. The organizing of the data was done on an iterative basis with the data providing the organizing system. The research participants indicated overwhelming agreement with the collective comments and attested to their reasonableness. The preliminary findings were also reviewed with several independent researchers to confirm the credibility of the results.

Results

There were strong overlaps between the career benefits identified by the research participants and the professional organizations themselves, but also some clear differences. Both the professional organizations and the research participants identified networking and knowledge as the key benefits of participation. Annual meetings sponsored by the professional organizations provide the opportunity for both of these benefits. Knowledge, as described by the professional organizations, also included publications, newsletters, information networks, workshops/seminars/conferences, subscriptions, and exchanging ideas. The mixed gender professional organizations also identified legislative advocacy as a key benefit, though this was barely mentioned by the research participants and mentioned only by a limited number of women's professional organizations. Accreditation and certification was mentioned only by mixed gender professional organizations. One-third of the professional organizations mentioned financial programs, such as discounts, insurance, and credit cards, though these programs were not mentioned by any research participants. A small number of the professional organizations mentioned benefits such as scholarships, leadership opportunities, recognition, research foundations, and direct career assistance as benefits. The benefits portrayed by the professional organizations did not differ significantly between the mixed gender and the women's professional organizations.

Career Benefits of Participation

The key career benefits obtained from participation in professional organizations can be described as occurring on the individual, interpersonal, and organizational levels (see Figure 1). These benefits were obtained over the duration of their participation.

Figure 1. Career Benefits from Participation in Professional Organizations.

Individual level	Interpersonal level	Organizational level
• Self-esteem	• Support	• Business development
• Skills	• Networking	
• Knowledge	• Giving back	

Research participants reported some career benefit being gained from participation in both mixed gender and women's professional organizations, but five benefits appeared to have unique dimensions when acquired from participation in women's professional organizations: self-esteem, skills, support, networking, and giving back. These five are discussed below.

Self-esteem

Self-esteem had several dimensions: motivation, inspiration, self-confidence, self-promotion, and recognition. The motivation and inspiration came from both the content of the programs and the interaction with other members. The programs often addressed topics that the women did not have occasion to think about in their daily workplace. Exposure to such topics was seen as motivating and inspiring. Likewise, interaction with the other participants was inspiring. The motivation and inspiration had a beneficial impact on their career aspirations. For example, "It brought home to me the fact that I have limitless potential."

The professional organizations enabled the women to gain self-confidence, through leadership positions and through positive interactions with other professionals, particularly in the women's professional organizations. This self-confidence was translated back to the workplace in several ways. Sometimes it resulted in direct action, which resulted in more visibility and recognition in the workplace. Sometimes it resulted in more self-confidence at work.

The professional organizations provided an environment for promoting oneself, as a business person and as an individual. For those from corporate environments, it was an environment free of politics and power; for those in business for themselves, it was an environment independent of business development and delivery. The emphasis was on individual, not business, development. In some cases the professional organization promoted its members as candidates for new opportunities in work organizations, which provided additional emphasis to the candidacy. Participation provided recognition. For some women, participation provided the opportunity to be visible and to receive recognition that was not available within their work organization. The professional organizations provided the opportunity to have their skills publicly recognized. For some women, recognition translated into enhanced stature and opportunities at their work organization. Leadership positions in the professional organizations conveyed importance to the woman in that position.

Participation in the professional organizations also provided a balance to the isolation the women felt at work. The women described participation in the women's professional organizations as enabling them to interact as whole persons, not just business persons, and as enabling them to better cope with the pressures they encounter as women in the workplace. As a result, the research participants reported being better able to deal with the pressures of work, to be more engaged in their workplace, and to tackle the obstacles they faced at work, all of which contributed to their ability to advance in their workplace.

Skills

The skills most often identified were leadership skills and communication skills. Participation in leadership positions enabled the participants to develop the management skills of planning, budgeting, organizing, staffing, delegating, and controlling and the leadership skills of setting a direction, motivating, and inspiring. Communication skills included both formal presentations and informal interaction, as well as written communication.

When these opportunities happened early in careers, they were described as learning experiences. When these opportunities happened later in careers, they were described as refining and enhancing skills. Often the opportunities for leadership in the professional organizations came before such opportunities in the work organization. Thus it was an opportunity to develop skills before they were needed at work and to be better positioned for new opportunities. The research participants believed that the professional organizations provided an opportunity to develop skills in a penalty-free environment; a mistake did not damage one's career--a mistake could be a learning experience. When the women discussed the learning environment in the women's professional organizations, it was from the perspective of the other members encouraging them to take on new challenges and asking them to do something--a supportive learning environment. The professional organizations provided some of the same opportunities to learn that developmental assignments in the work organization might have provided, without the potential downside.

Support

Support was described by the research participants as emotional support, encouragement, nurturance and friendships. The women often found themselves isolated at work with few other women in their work organizations, particularly those who entered the workforce in the 1960s, and many of the women described their work environments as male-dominated. Participation in the women's professional organizations provided some balance to the isolation, which enabled the women to better confront the isolation and gender bias they encountered in their workplace. Lessons learned about how to handle work situations (particularly interpersonal or token situations) were shared, which again enabled the women to better handle the situations they were confronting.

Professional organizations could be an anchor during times of transition, could facilitate relocations, and enabled the women who had a break in their career to maintain professional contacts and to remain functionally current with their profession. Professional organizations were viewed by the research participants as a safer environment than the work organization, safer for learning and safer for seeking guidance and support. There were no penalties to expressing a lack of knowledge or for self-disclosure. There was a sense that the research participants self-disclosed more in the women's professional organizations and that the level of trust was higher there than in mixed gender professional organizations or in the workplace. Thus the support could be more meaningful to the individual.

Networking

Interacting with others, making personal and professional contacts, finding mentors or sponsors, and developing relationships were all part of what was described as networking. Networks in the context of the professional organizations had the same characteristics as networks in the context of the work organizations, that is, both formal and informal networks and both instrumental and expressive networks existed.

The expressive networks provide personal relationships. Particularly for those in male-dominated workplaces, these networks filled a gap in their work networks. Instrumental networks involve the exchange of work-related information, expertise, advice and potential access to resources. Some women viewed the professional organization networks as an extension of networks they had already developed in their work organizations. Sometimes the women found mentors (both male and female) through the professional organizations. The cross-sex mentoring relationships did not suffer from the same potential pitfalls as those found in work organizations, for example, resentful co-workers. Some women were able to have same-sex mentoring relationships, when this was not feasible in their workplace given the limited numbers of women in senior positions.

The contacts the women made opened new doors for them. Overwhelmingly the research participants described networking as the major benefit of participation in professional organizations--both instrumental and expressive. As one woman said, "By far the collegial relationships are the biggest benefit."

Giving back

For the research participants in their later career stage, giving back to others in their profession was a key benefit identified by them. This was specifically discussed in the context of helping younger women in their careers, but was also clearly an element of their own development as adults. Giving back occurred through mentoring and guiding others. Even when the women believed that they were no longer obtaining the same degree of benefit from a professional organization, they felt an obligation to continue to participate so that other women might benefit in the same way that they had when they were in earlier career stages.

These women also felt an obligation to mentor younger women in their work organizations, but were concerned about the dearth of senior women in their work organizations and the time constraints imposed upon them by mentoring others with no direct recognition or career benefit to them. Even though the women expressed concerns, they also indicated that they mentored younger women whenever possible. The research participants felt personal fulfillment and were able to help the careers of younger women. There was a sense of a "community of women," conceptually if not in reality, that was important to care for--that women needed to reach out to one another.

Overall Perspective

There were three overarching observations about participation in professional organizations. First, the benefits obtained from participation in both mixed gender and women's professional organizations were obtained over the long run, though some could be obtained faster in the women's professional organizations. Second, there was a strong belief among the research participants that "gender issues are alive and well"--in the workplace and in society--and thus there is a real need for women's professional organizations. The research participants believed that it was important to share lessons learned and to help younger women understand these issues. Third, mixed gender professional organizations were important too because women work with men. "We don't live in a vacuum, we don't operate or work in vacuums, and we need to interact with both sides." According to the research participants, participation in both mixed gender and women's professional organizations provided the best path for contributing to one's career development and advancement. However, there were some differences in the career benefits described by the research participants between women's and mixed gender professional organizations.

Perceived Advantage of Women's Professional Organizations

Although the research participants saw career benefits from participation in both mixed gender and women's professional organizations, they believed there were differences in the benefits obtained. These differences resulted primarily from their experiences that women interacted as whole persons whereas men interacted only on a business level. As one woman said, "The women's groups tend to take a more holistic approach." Thus both the content and the context of the interactions were different.

The women shared stories with one another about how they coped with different situations (e.g., balancing work and family, dealing with difficult interpersonal work situations, handling being a token). There were more conversations about family issues and the women got to an intimate (i.e., more personal) level more quickly in the women's professional organizations, which they did not do in mixed gender professional organizations. The women found it easier to connect and to identify with the women than in the mixed gender setting.

The general perception was that women started from a position of trust in the women's professional organizations, which was not true in the mixed gender professional organizations. The interactions were described as "more relational" in the women's professional organizations, and the women were perceived to be more supportive. For example, "Women were more willing to help you when you're down and to cheer you when you're up." This was in contrast to the women "measuring their words a little more carefully" in mixed gender professional organizations.

The research participants also viewed the level of participation to be different. Typically the women viewed their participation as greater in the women's professional organizations due to their greater comfort level with women, as well as to other female members reaching out. The camaraderie and openness described in the women's professional organizations contributed to this greater comfort level. This contrasted with the mixed gender professional organizations where the women tended "to sit back and watch to get a feel for the flow before jumping in." The perception was that you had to promote yourself to take advantage of opportunities in the mixed gender professional organizations whereas others reached out to you and encouraged in the women's professional organizations.

The result of the differences between women's and mixed gender professional organizations was that the women moved more quickly into active participation and leadership positions in the women's professional organizations than in the mixed gender professional organizations, which enabled leadership and communication skills and self-esteem to be developed more quickly in the women's professional organizations. Emotional support and encouragement were described as present in the women's professional organizations, but not in the mixed gender professional organizations. The expressive networks and the female mentors described by the research participants were found in the women's professional organizations, but not in the mixed gender professional organizations. And giving back to others was manifested only in the women's professional organizations.

There were some potential negative differences between mixed gender and women's professional organizations. Some expressed concern that the women's professional organizations were more cliquish and that women could be more critical of each other. Because the women's professional organizations were often established to address a perceived problem, there was a belief among some that these groups required a constant emotional reconfirmation of one's commitment to their ideals, which could be emotionally draining.

Conclusions

The purpose of this study was to investigate the potential value of women's professional organizations for women's careers. This study results indicate that there is a potential role for women's professional organizations, but that role will vary depending on the needs of the individual. There were seven potential career benefits for women from participation in professional organizations, of which five were gained predominantly from participation in women's professional organizations: self-esteem, skills, support, networking, and giving back. Although the women clearly saw benefit to participation and they were able to identify transference of those benefits from the professional organizations to their workplace, they were unable to make the connection between those benefits and their career development and advancement.

The benefits to be obtained from participating in professional organizations were seen as complementary to experiences in the work organization. Sometimes participation was able to fill in the career development gaps found in the workplace. Participating in professional organizations is not equivalent with belonging to professional organizations, that is, one must actively participate and take on leadership roles to gain the full benefit of participation.

This study was a preliminary exploratory study with a limited number of study participants who were all American professional women in leadership positions. The data collected was retrospective and thus potentially limited by the interviewees' recollections and by their ability to objectively evaluate the factors contributing to their own career development and advancement. This study explicitly restricted itself to the study of the role of women's professional organizations in women's careers and its findings may not generalize to other external professional activities nor to other single gender organizations. This study was limited to the experiences of the participants and the organizations to which they belong. There appear to be differences in the career benefits across career stage and among participants from different work environment, but these indications warrant further study. This study focused on women and did not ask whether benefits could be obtained by men participating in professional organizations or whether the benefits obtained by women differed from the benefits obtained by men.

Contribution to New Knowledge in HRD

The three primary audiences for the results of this study are work organizations, women in the workforce, and women's professional organizations. First, with women representing nearly 50% of the entrants into the workforce, work organizations are interested in how best to develop and maximize this large resource, resulting in development and advancement for women. This study asked whether benefits might accrue to a woman's career from participation in a women's professional organization and when this avenue of career development might be beneficial for a work organization to support. Second, with evidence of less than a level playing field (i.e., the presence of the glass ceiling), women are interested in how best to improve their chances for advancing in work organizations. It appears that women's professional organizations may be a vehicle to enhance career development and advancement. Finally, with professional organizations vying for members, women's professional organizations would be interested in studies that articulated the benefits to potential (and current) members of belonging to their type of organization. This study contributes to the body of knowledge in HRD through the investigation of the role and purposes of women's professional organizations for women's careers.

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Non-profits and Women CEOs' Careers

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This paper explores questions of the development of a 'new balance' between the self-interests of women chief executives in British non-profits and the organisational interests of non-profits in retaining able women. Two contrasting theoretical frameworks are used. That of 'career development', emphasising the primacy of the individual; and that of 'capacity building', in which organisational needs predominate. Implications for human resource development in smaller non profits are identified.

Keywords: Women, CEOs, Non-Profits

There are currently tensions within the non-profit sector in Britain between individual and organisational aspirations for career development for women and the needs of non-profit organisations, (especially smaller organisations), for long term worker commitment. Women senior managers predominate among the smaller organisations, where organisational survival may depend upon the retention of these key women postholders. Their individual careers, (if regarded as an organisationally upward trajectory) may be on hold, neglected or abandoned. Smaller organisations have difficulties in planning strategically for human resource development and change. Yet many are under pressure to convince funders that they will not collapse if key workers (often women) leave. The sector appears increasingly driven by asking 'what do funders want?', and in this case, "what do they want in terms of our HR policy and practice?" However this is circumscribed by what women CEOs want themselves and what they have been able to achieve.

This paper draws on three studies: two completed and one ongoing, to illustrate this issue. The first shows women CEOs in Britain as over-represented in the smaller organisations. The second highlights the organisational survival tactics of smaller voluntary organisations, faced with a range of demanding funding regimes, and involving heavy reliance on one woman CEO staying with the organisation through thick and thin. The third, on which the paper concentrates, moves away from context to take cognisance of the people at the centre of the issue. It examines women's CEOs perceptions and experiences of their career development and transitions, through an ongoing series of in-depth interviews, using biographical research methods. Drawing on the prior research, this biographically-based study asks whether women CEOs in this sector are remaining organisation-centred (by choice or by necessity as career options are limited) or are becoming self-orientated in terms of career development?

Some early implications for human resource development in this sector, arising from this question of relative balance of interest, are discussed. These include the extent to which this sector "wants things both ways" - to be seen to be developing career-friendly environments for women, where their all round ability can be demonstrated (in one respondent's terms,"doing what it takes"); but also making heavy demands on women's commitment when the organisation is struggling and known to be surviving against the odds (from another respondent's perception, when the organisation is to all intents and purposes, "running on empty").

The Theoretical Framework - 'Career Development' and 'Capacity Building'

With the research focus that of the individual career perceptions and experiences of *existing* women CEOs in non-profits, the literature from career theorists is central. Thus, Evetts (1992) examines the prescriptive notion of rationally planned careers as 'upwards moves', where deviation from this norm is seen as imperfect. For women, careers might be 'interrupted'; for both men and women, their careers might be 'blocked' or 'opted-out of' or 'time-serving' (Evetts 1994). Men's and women's career success tends to be assessed in terms of movements up through organisational ladders. Yet, many women and indeed many men appear to want things other than 'advancement' from organisational career structures. This is especially pertinent to careers in non-profits where the size of organisation and the insecurity of tenure may preclude advancement through an organisational hierarchy, and where well structured internal career paths scarcely exist, apart from within the very largest organisations. For many CEOs

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in non-profits therefore career success may be seen more in terms of 'making a difference' than career advancement as an end in itself.

Career development is seen by Arthur et al (1989) as influenced both by the individual and external institutions. Inkson (1995) points to the themes of "..order., progression and proactivity" as underpinning much academic theory on career development. In reviewing the effects of changing economic conditions on managerial job changes, Inkson argues that a "better approach" (for organisations) might be to "encourage organisational newcomers to be realistic about the endemic and increasing uncertainty of future occupational progress" (1995, 1993). Hirsch et. al. (1995) argue that organisations are relying more on 'self development' on the part of employees because the pace of change makes it ever more difficult to provide well-structured career paths and development. The increasing emphasis on self-development is a major culture change, implying as it does that everyone can develop and progress. In this context personal development plans, mentors, and networking are all indicative of a self-development approach to careers.

This literature has provided an overall thinking and language framework for the women CEOs' career perceptions study although it draws mainly on employment worlds other than those of non-profits. The challenges for the research include the extent to which the changing environment of non-profits contrasts with that of the for-profit world, inasmuch as the needs for human service work during periods of recession may be expanding rather than contracting. Thus, more traditional notions of 'career' may still be legitimate in this sector. Since the women CEOs study began, an organisational explanation of "what's going on" has been articulated by Adamson, Doherty and Viney (1998): "..what we mean when we talk of the *death* of the career is simply that the rules of the career game have changed". How, if at all, this applies in the non-profits sector, is under exploration.

What of the organisational interest in this area? The concept of 'capacity building' has made the transition from the fields of economic and technical development to those of social and organisational development (Harrow, 1998). In the international and national NGO fields, funders seek to promote non-profits' organisational "capacities", with the assumption that with improved capacity comes improved and sustainable performance. The development of human resources of these organisations is seen as a core component. Ohiohenuan and Wunker (1995) concentrate on the understanding of organisations' internal capacity through examination of four key areas - those of human resources, organisational processes, physical resources and external support.

Hilderbrand and Grindle define "capacity" as "the ability to perform appropriate tasks effectively, efficiently and sustainably"(1997, 34). Their five-fold framework for assessing 'dimensions of capacity', to aid capacity-building interventions, includes (as the final 'dimension'), that of "human resources". Here the emphasis is on the retention and utilisation of individuals in organisations; and importantly for this paper, "the extent to which training and *career trajectories (our italics)* affect the overall performance of a given task". Hilderbrand and Grindle go on to argue for the inter-connectedness of organisational performance and human resources. In case study research, they discovered the relative importance of "effective utililisation" of human resources as a contributing factor in organisational performance, rather than the 'recruitment' or 'training' aspects of human resource management,. (op. cit., 53). They found "professionals very sensitive to whether their jobs were meaningful"; with "retention highly sensitive to performance rewards and job satisfaction". Although this model is public sector-oriented, its application to non-profits is signalled strongly. Public funding for this sector is extensive; and the feature of 'resource constraints', which affect public services, manifestly are also a feature of non-profit organisational life.

These areas of the literature provide the underpinnings for the accounts of the research which follow. Intriguingly, the HR component in the 'capacity building' literature appears to imply a strong coincidence of organisational and individual interest in career development processes; whilst some of that in the individualistic field of career development (especially the self-development work) does not. In this sense, the over-arching research question in this paper, whether women CEOs see themselves as moving towards individualised or organisationally-rooted career perspectives, or in maintaining these pressures in some sort of balance, appears particularly important.

Prior Research (I) The UK ACENVO survey

A survey investigating the relationship between gender, CEO position and size of voluntary organisation was carried out by the Association of Chief Executives of National Voluntary Organisations and the Centre for Public Services Management, during 1994/95 (Dawson, 1998). The survey was sent to all 540 ACENVO members, with a response rate of 59% (321). By chance, the profile of the respondents closely reflected the then gender split of the ACENVO membership: 60% men and 40% women. Again by chance, the organisations in the sample reflected the range of organisations in ACENVO, in relation to total income.

A direct relationship between the size of the voluntary organisation and the gender of the CEO was found. Male CEOs were found in 75% of the larger voluntary organisations, defined as possessing incomes of £5 million and over. Nearly 80% of the smaller voluntary organisations, with incomes of less than £100,000 had female CEOs. Just over 50% of organisations with incomes between £100,000 and £1 million and fewer than 20 full-time equivalent staff have female CEOs. The proportion of female CEOs declined to 30% in organisations with an income between £1-5 million, to 25% in organisations with an income between £5 -15 million, and to 20% in organisations with an income over £15 million.

Thus of the CEO posts held, women were more likely to head smaller organisations, with budgets of less than one million pounds, and fewer than 20 full-time equivalent staff. Where the staff were more than 80% female, then a woman was likely to be CEO. No relationship was found between gender and type of organisation, although 'umbrella' organisations were more likely to be run by women, with men CEOs predominating in international organisations. Whilst men and women CEOs in this sector headed every kind of organisation, and had similar qualifications and similar work patterns, a key difference was their location. Here, one explanation could relate to age groupings. There were similar numbers of men and women in the 40-49 age group. In larger organisations CEOs were likely to be over 50, and there were more male CEOs than women in the 50-59 and over-age groups. As quantitatively oriented research, this study did not address CEOs perceptions, (men's or women's) of their organisational location vis a vis their career, their organisations' relative prestige and power, nor the extent to which they were developing personal career plans, in which their organisation might, or might not, figure. Given the imbalance of men and women in location terms, a subsequent qualitatively-oriented study was indicated.

Prior Research (II) London and Sheffield (UK) Study on Funding Regimes and Capacity Building.

Concurrent research in the Centre for Public Services Management, funded by the Joseph Rowntree Foundation, during 1997/98 studied selected small voluntary organisations' responses to a variety of funding regimes (for example, survival, collapse, sustained or patchy growth); including an exploration and assessment of these organisations' capacity building abilities or strategies. Although the study did not set out to focus on the pivotal role of CEOs, it used the Ohionenuan and Wunker (1995) model of the constituent elements of 'capacity building', including that of human resources. From case studies of sixteen organisations, tracking back over ten years of their organisational histories, findings linked organisational viability to factors including organisations' networking skills and ability to manage (or good fortune with) their share of human resources. Among the latter, both an organisational strength and potential weakness was the heavy reliance on the senior manager or CEO. "Even in thriving organisations, skills deficits were acknowledged and were often compensated for by the abilities, energy and in some cases near superhuman performance of the chief worker". Predominantly, these postholders were women. For both men and women CEOs, organisational 'over reliance' on them was increased where funders failed or declined to fund 'deputies', and where the project-driven funding environment appeared to exclude many opportunities for developing the 'general management' human resource potential among other existing staff of the organisation.

The study was commissioned to help identify good practice for funders; and was not gender-directed. Its findings pointed to organisations' (and funders') responsibilities to recognise risks of 'over dependency', and develop succession planning strategies for these key posts, however limited. Succession planning had been seen throughout 15 of the 16 organisations as a luxury which ruefully they were unable to indulge in, rather than a necessity which their small size and scale made the more vital. The extent to which organisations in the study were going so far as to exploit their CEOs willingness to stay and work creatively, often on the brink of organisational demise, was recognised implicitly by the researchers; but not developed as a major research theme. Hence the case was strengthened further for a CEOs "perceptions" study, in which their, rather than the organisational 'stories' could be told.

Research in Progress: Women CEOs' perceptions of careers in the non profits

Primarily as the qualitative 'next stage' of the ACENVO/CPSM survey, a study entitled *'Voluntary Sector Chief Executives: Careers, gender and organisation, 1998 -2000'* began in CPSM in January 1998. This research investigates careers in the voluntary sector by undertaking career history/ researched biography interviews with a cohort of 25 women and 25 men chief executives of medium-sized organisations. The purpose of the research is to establish career histories of men and women CEOs in the non-profits sector showing how careers are made, and

pathways to the top of the organisation, drawing on the actors' "voices" as the information source. The choice of medium-sized organisations will eventually allow equal numbers of female and male participants to comprise the study sample, enabling comparisons to be made of women's and men's careers in this sector. Lengths of time in post will vary. The study sample is being obtained from organisations listed in the The Voluntary Agencies Directory 1997/1998.

Research Design Issues

The research design is exploratory and qualitatively oriented (Patton 1980, Marshall & Rossman 1989). The research question concerns whether CEOs' career 'patterns' or stories in this sector show them as either (a) remaining organisation- centred or (b) becoming self-orientated in terms of career development? Face to face interviewing with chief executives is being undertaken, using the approach of 'researched biographies/career histories' as advocated by Torbert and Fisher (1992), who argue that autobiographical writing is an indispensable process in social science research; and acts as a catalyst for managerial and organisational development. In this way the researchers hope that the 'giving' relationship implied by respondents' participation in research activity can be in a two-way form, with interviewing sessions providing a limited basis for self-reflection and learning by those respondents. The research approach which encourages the use of 'narrative research' as a means of drawing out meaning from respondents' language (Lieblich, Tuval Mashiach and Zilber, 1998) has also been drawn upon. Career histories gather data on individuals from their own perspective. The interviews are guided by four broad topic headings: the job and organisation, career history, working in the non-profit sector and future career aims and objectives. The research question is not posed directly.

Thus far, research among women respondents has been undertaken, with 15 interviews with CEOs analysed for thematic patterns which confirm findings for an overwhelmingly '(b)' position, as described in the research question. In particular, career history and future career aims and objectives sections of the data have been analysed in order to identify the career strategies of this sample of women CEOs. As the study progresses an appropriate software package (NUD.IST) will be used to aid data analysis.

A number of methodological problems are encountered using the career history method. Firstly, there is the problem of retrospective recall of information by participants in the study. Memories are fallible. However, since changes of job are significant events, the accuracy of the data collected is likely to be reasonable. There is also a tendency to ascribe some sort of pattern to a career looked at with hindsight. The issue of selective recall lends support to the argument that career history research is inevitably subjective. Notwithstanding, Dex (1991) in her review of research work on recall suggests that it can be reliable for certain topics, thus the claim that career histories are purely subjective goes too far. For this study we were concerned with matching the scientific reliability of survey research with the rich ethnographic data provided by career histories. In this way we gain a more detailed picture of careers in the voluntary sector.

The Research Sample

The women chief executives taking part in the career history interviews are working in a variety of non-profit organisations including professional associations (3), social services and healthcare (3), research, education and training charities (5), an intermediary organisation, housing advice, community development and law/advocacy organisation, respectively. The size of the organisations spans an income range between £80,000k and £2.5 million. The smallest organisation employs 2 staff members and the largest employs 30 staff members. Lengths of time in post vary from 8 months to 21 years. The women have a variety of functional backgrounds and experiences inside and outside the not for profit sector. Two women are aged between 25-34, three are between 35-44, eight are between 45-54 and two women are 55 and over. Eight of the fifteen women have two or more children.

The Research Findings

Findings from the career history interviews to date show women CEOs pursuing careers more predominantly within a context of 'self' than an organisational orientation.

> "... I would say that I have not been encouraged, at the same time people have not been unhelpful, but you have to do it yourself." (CEO, professional association)

Eight of the women interviewed described an overt career strategy of moving around within small and medium sized organisations, to gain experience, moves variously prompted by boredom or in one case by an external, temporary (male) 'mentor:

> "The person from Charity Appointments (an executive search agency) said I should apply. He said it would be a challenge and that I should have a go." (CEO, community development organisation)

Five of the women CEOs looked for new challenges by growing the organisation from within, especially findings new ways for the organisation to adapt to environmental change. This however prompted organisational dissatisfaction also; most marked by the respondent who reported awareness of organisation (or individual) exploitation:

> "There is no guaranteed income so that if the funding runs out we will lose our jobs. This makes for anger and frustration because we know that there are statutory organisations that should be funding us and they can get away with it because in the end ... people are taken advantage of because of their need to ensure that the organisation is there, so if we apply for funding and are defeated we will keep going. And I feel angry about that. ..." (manager: social services organisation.)

Two of the women interviewed may be described as occupying a space somewhere between organisation- self-orientation. Mindful of developing themselves and their careers they are also committed to growing the organisation. Thus

> "Work is very important to me and I want to do well but I am quite interested in growing this organization. I do not really want to run a big service provider, I'm more interested in research /policy-led organisations and that is what I want to do here." (CEO, community development)

Thus far in the interviews, a career in non-profits has been chosen by the women chiefly because it provides opportunities for meaningful work and the ability to 'make a difference' to the world in a socially-useful way. One respondent saw her needs and the organisation's needs as matched rather than in tension, whilst drawing apparently on what she saw as gender-specific qualities:

> "..I have always seen myself as a person who is good with people and in the voluntary sector this is an area that is very important, not only with service-users but also in terms of campaigning e.g. have to use charm, talk with judges and so on. This makes me feel good...." (manager, social service)

However, the question about their over-representation in the smaller organisations remains; with respondents somewhat apologetic rather than irritated or annoyed:. Thus

> "I would not have credibility applying for a bigger organisation because prospective employers will see that I'm leading a small organisation..."(CEO, professional association)

> "A lot of the support work, mentoring, trouble-shooting does not show on the CV and I wonder how credible that makes me for jobs in organisations employing 50 people but I have been doing the same in terms of managing and keeping all the plates spinning. A lot of the work is enabling others to do things and that is not so easy if you're trying to shift into the mainstream"(CEO, intermediary organisation).

To return to the overarching research question, are women becoming more career oriented or remaining organisationally focussed? Whilst strong claims for a new generation of women CEOs more committed towards self-oriented careers cannot be made using such a small sample alone, findings from the career history interviews show that over half of the women interviewed are developing this career strategy. Factors pushing this development may include the very existence of (relatively new) specialist executive search agencies; the normalisation of mentoring /networking (for example, six women were actively involved in action learning sets run by ACENVO) and eleven mentioned the importance of positive (and negative) role models, and supportive relationships. The career history interviews suggest so far that an individualist mood prevails. As the study progresses, more evidence to support

or refute this claim will be collected. However, women's representation in the larger organisations and movement between smaller organisations and larger organisations appears to remain a barrier to overcome.

Conclusions

Preliminary analyses of the women CEOs' perceptions of career development in this sector are suggesting a shift towards the 'me' and away from the 'us' view of work in the UK non-profits that seems to have prevailed in the organisational versions of their 'stories' of survival and growth. This confirms the view from the literature that "the rules of the career game" are changing for this group; whilst challenging the view that individual 'self development' is equally valuable for the host organisation. Such a development is in contrast to the London and Sheffield case studies, where women were reporting strong awareness of how much their organisation relied on them; and their apparent decision to continue commitment at a high level. The positive linkages between individual feelings of their value to their organisation and the quality of that organisation's performance (the 'capacity building' dimensions model) appears to be supported from the interviews to date. However, the research design itself may encourage this; and a case for developing some 'objective' measures of organisational success, alongside the 'stories' can be made.

A number of the women's accounts are beginning to suggest a picture of a 'caring sector' that does not actually 'care 'for its own people, in the sense of recognising and supporting career aspirations. In the smaller organisations, where there is heavy reliance on key postholders, this may be equated less with a full scale 'exploitation of women' situation; and more with a less clear cut exploitation of 'the feminine'. Thus, women's believed nurturing roles, and close commitments to colleagues are drawn upon to 'hang on' to key workers and to draw very high levels of performance from them. These kinds of experiences from the interviews, parallel strongly the accounts gained from the earlier case study work. Exercising a guilt-based hold on would be career- movers has appeared - the 'what would we do without you?' syndrome. At the same time, a handful of women CEOs may also be exploiting the 'feminine' in their plans to advance or at least sustain their careers.

As research in progress, this work is a long way from contributing to new career theory or at least to its adaptation, to take account of the particular employment world which the non-profits encompass. However, the chosen theoretical frameworks have already pointed to the potential for mismatch between the assumptions of organisational capacity building (where HR improvements leads to gains all round) and those of the career self-development literature, where organisational needs are necessarily set aside. What has been appearing as a running theme throughout the interviews, where interviewees have opted for the self- rather than organisational orientation in their career ideas, is the possibility that their organisations have yet to 'wake up' to this situation.

In other employment sectors, where traditional career routes are known to have ceased and diminished, both parties tend to possess this knowledge and act accordingly. Thus far, in this research, the non profits sector appears one where that sense of balance has not yet occurred. Put bluntly, the 'new balance' discussed at the start of this paper, is one where self-orientation among CEOs is developing well ahead of organisational awareness that high and enduring loyalty levels may no longer be expected from senior staff. With responsibility for HR planning and development in the hands of volunteers rather than professionals - the organisations' boards of trustees - this may be inevitable and the impending organisational 'hurt' as job change among CEOs in the sector occurs more and more may be unavoidable.

For the 'rules of the game' to have been fully shifted, women CEOs will need not only to be able to sustain their self orientation in their careers but to gain posts in the larger and largest non-profits. However, when the studies of men CEOs are underway, a similar pattern to the women's experiences may be presented (or at least recounted to the female researchers). For HRD practitioners and academics, these developments point to the need for increased awareness in the tensions facing smaller non-profits organisations, often exhorted to enhance their 'people policies'. In a period of recession and decline, when the need for human service organisations increases, it is ironic that the notion of 'upwards' career development may still be taking place in this sector when it is diminished or gone in the for- profits fields. Yet the opportunities for non-profits to capacity build in this area is limited. Funders seeking enhanced organisational performance from non-profits are urged to support, the HRD aspirations and opportunities of women as well as men in this sector; and to recognise the possibility of more volatile performance from those organisations, where women CEOs are giving primacy to their own rather than their employing organisation's career needs.

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Career Development Of Expatriate Managers: An International HRD Issue For Singapore-Based Companies.

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Expatriate human resource development is poised to play a major role in determining the success or failure of companies seeking to do business across national borders. This has become more critical with the onset of the knowledge economy. For Singapore companies, the regionalisation drive initiated a few years ago, and the eventual integration of the ASEAN market makes it imperative that companies begin to focus on developing human resource for the regional and international web. In the international HRD literature, expatriate career development did not receive proper attention, although it is a significant issue for effective expatriate performance. This paper presents some empirical information from a recent study conducted on expatriate development in Singapore.

Key Words: Expatriate Career Development, Singapore, Asia

Today, people create national and organizational competitiveness, compared to earlier suggestions of classical economic theorists that mere access to advantageous factors of production can make the difference (Kindleberger, 1970; Porter, 1990). People invent and utilise technology, people formulate and implement strategy and people design and build organization structures. In today's global marketplace, to get the right people with the right skills inventing and utilizing technology, formulating and implementing strategy, and designing and building organization structure at the right place and at the right time, movement is needed – movement of people across national borders (Black, Gregersen and Mendenhall, 1992). Yet, human resource systems remain one of the major constraints in implementing global strategies. This is more significant for multinational companies (MNCs) operating in today's global business environment. Although much has been written on international human resource management, very little research has been done on international HRD, specifically on career development of managers responsible for international business operations (Tung, 1988; Harvey, 1989; Black, Gregersen & Mendenhall, 1992). From a review of the literature, career can be defined as "the pattern of work-related experiences that span the course of a person's life" (Greenhaus, 1987) and career development looks at the long-term career effectiveness and success of organizational personnel (Cenzo and Robbins, 1994). According to French (1994), career development programs represent efforts to increase the organization's present and future ability to meet its goals by providing educational and development experiences for managers above and beyond the immediate technical requirements of their jobs.

As companies extend their international reach, the increasing importance of such overseas operations can place the success or failure of their international initiatives in the hands of their expatriate managers (Bennett, 1993; Foxman and Polsky, 1991; Mendenhall and Oddou, 1991). To become truly global, MNCs need to begin linking their HR practices to company-wide strategic objectives. Evans (1993) suggests that international HR practices may serve as 'glue' which can be used to link the management of personnel to the development of the organization as a whole. The linkage of global strategy and international HR practice should be born out of the realisation that the power to become a truly global firm rests with the organization's HRM. Studies show that a significant number of expatriate managers fail in their duties, to the great expense of their employers. Tung (1987) found that, of the 80 US MNCs surveyed, half had expatriate failure rates exceeding 30 per cent. The average cost of each failure to the parent company was estimated 10 years ago at between $250,000 to $1 million (Copeland and Griggs, 1985). As a result, American firms may lose at least $2 billion a year (Caudron, 1991). These figures suggest that in order to be successful in the international business arena, corporations must begin addressing the HR issues which accompany the use of expatriate managers. In most instances, positive changes in skill levels experienced by the expatriate even went unnoticed and unused (Adler, 1986; Bennett, 1993; Mendenhall and Oddou, 1991; Tung, 1984). This can lead to negative consequences for the organization and MNCs may deprive themselves of excellent resources to aid them in the globalization process (Bennett, 1993). As such, career development planning, involving global and cross-cultural training, becomes necessary for managers in today's organizations, regardless of their domestic or international assignments (Osman-Gani, 1996; Marquardt and Engel, 1993; Odenwald, 1993; Reynolds and Nadler, 1993; Johnston, 1991; Rhinesmith, 1991).

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Reviewing the literature on international HRD, very little work could be identified in the area of expatriate career development. Naumann (1993) suggests that the extent to which MNCs provide well defined career paths for expatriates may serve as a signal of the organization's commitment to them. Evidence indicate the extent to which expatriates saw their assignment as benefitting their careers was significantly related to their intent to leave the firm. Communicating the recognition that the expatriate assignment is vital to both the success of the MNC and to the expatriate's career, the MNC can provide validation of the expatriate experience (Adler, 1986). The more the MNC allows its expatriates to see a clear relationship between consecutive job assignments, the more time and energy they will be willing to invest on behalf of the organization (Feldman and Thomas, 1992). Furthermore, the use of expatriate experience in the creation of logical career paths is an important way in which MNCs can utilise the development of international experience among its human resources as a mechanism for fulfilling globally-oriented corporate strategies.

Survey results of 46 US multinational corporations (Handler, Lane and Maher, 1997) indicate that expatriate career-planning issues are salient concerns, consistent with literature establishing that such issues should be of major concern to MNCs (Adler, 1986; Bennett, 1993; Feldman, 1991; Feldman and Thomas, 1992; Nicholson et al, 1990; Mendenhall and Oddou, 1991). The results also suggest that few MNCs have policies to assist with expatriate career planning and that much of the assistance currently offered falls short of the needs of the MNC's expatriate HR. Findings reveal a gap between the importance of career planning issues and the level of career-planning policy currently available.

As expatriate development is becoming a key HRD issue in the dynamic Asia Pacific region, this needs to be accorded much more importance (Osman-Gani and Tan, 1998). Until the recent financial crisis (since the last quarter of 1997), East Asia was one of the fastest growing regions in the world. According to the UN World Economic Survey, East Asia grew by an annual average rate of 4.5% during the last decade, while ASEAN's (Association of South East Asian Nations) average was at 6.8%. The comparable rate for the US was 1.4% and 1.7% for Europe. ASEAN member countries were ranked among the world's largest hosts of foreign direct investment inflows. At the same time they are becoming significant foreign investors themselves, mostly in other less-developed Asian countries. The OECD has projected the Asia-Pacific to grow by 5-6% to the year 2010. On the other hand, the comparable rates for North America and Europe were set at 2-5% and 3-4% respectively. While much has been written on expatriate selection, training and development in general, very little was documented on career development of expatriates from different national and cultural backgrounds working in Asia. With Asian economies ready to take centre stage in the twenty-first century, despite the recent financial crisis, it is logical that we should have a better understanding of the expatriate development issues, for effective expatriate performance in Asia. Furthermore, no empirical study could be identified that investigated expatriate career development in the Asia Pacific region. There seems to be a research gap in the international HRD literature from this perspective.

This paper presents some empirical results from a recent study conducted in Singapore. The study investigated expatriate career development, from the perspective of multinational corporations based in Singapore and local companies with overseas operations. Singapore plays a key position in the agenda of most multinational corporation's planning to do business in Asia, and is one of the sought after locations for siting regional headquarters. Additionally, this issue is particularly relevant to local companies because of the regionalisation drive that is being promoted by the Singapore Government.

Research Questions:

This study attempts to address the following research questions:

1. What is the status of companies using career development plans for expatriates in Singapore?
2. Where does responsibility for the planning and designing of career development plans for expatriates reside in the organisation?
3. What are the key features of an expatriate career development plan?
4. How frequently are such career development plans reviewed?
5. .How does repatriation issues feature in the career development plan?

Research Methodology:

This study used an exploratory research design and followed a survey methodology. A national survey was conducted on a sample of MNCs based in Singapore and local companies having overseas operations. A

questionnaire was developed based on the findings of an extensive literature review and the feedback from sample interviews with selected managers of Singapore-based companies. The questionnaire was pilot tested on a group of 40 managers, of whom 25 were from MNCs. The questionnaire was tested for reliability and validity using the responses from the pilot sample, and using a panel of experts consisting of faculty members in the Nanyang Business School, Nanyang Technological University. The final questionnaire was administered using local mail and personal administration procedures. Two follow-up measures used were, telephone calls and facsimile system. Using proportionate stratified random sampling procedure, a sample size of 400 companies was selected from the "Singapore 1000 database; comprising 300 MNCs and 100 local companies with overseas operations. The overall response rate was 23%, which is considered to be normal for this type of study in Singapore.

Results

Respondent's Profile

Respondents of this study are senior managers from MNCs and local companies based in Singapore. About 77% of the respondents are from MNCs and a large proportion (39.3%) came from the manufacturing sector, followed by the financial and business services sector (21.4%). The respondent companies, by country of parent company origin, can be classified as American (12.1%), European (24.2%), Asian-excluding Singapore, (45.5%) and Singaporean (18.2%). A large percentage of the Asian companies are Japanese firms. The majority of respondents falls into the age group of 30 to 50, with 41.2% aged between 30 to less than 40 years' old, and 38.2% aged between 40 to less than 50 years' old. In terms of service, 47.1% of the managers have been with the company for less than 5 years and 26.5% of the respondents having served between 5 to 10 years. The respondents are quite evenly distributed among the various levels of management: 35.3% in top management, 44.1% in the middle and 20.6% in line management.

Research question 1: What is the status of companies using career development plans for expatriates in Singapore?

Table 1 presents the findings in order to respond to the above research question.

Table 1
Percentage of Companies (By Continent) With Separate Expatriate Career Development Plan

Expatriate Career Development Programs	America	Europe	Asia (-Sing)	Singapore	Total
Yes	8%	12%	33%	9%	62%
No	4%	12%	13%	9%	38%
Total	12%	24%	46%	18%	100%

It can be observed from the above table that 62% of the companies have a separate career development plan for expatriates, of which about 42% were Asian MNCs (Japanese, Korean and Singaporean). This appears to contradict general expectations that the Western MNCs have more established career development plans. The high percentage registered by Asian MNCs could be the result of the increased internalisation drive while the Americans and Europeans, on the other hand, scored low probably because they had longer experience in the international scene and had already started their localisation program.

Research question 2: Where does responsibility for the planning and designing of career development plans for expatriates reside in the organization?

The research findings to respond to the above question are presented in Table 2.

Table 2
Responsibility of Planning Expatriate Career Development (By Continent)

Management Level	America	Europe	Asia (-Singapore)	Singapore	Total
Top Mgmt	0%	14%	24%	10%	48%
HR&Functional Mgmt	0%	0%	4.5%	0%	4.5%
Top Mgmt & HR Mgmt	9.5%	0%	14%	0%	23.5%
Top Mgmt & Functional Mgt	4.5%	0%	0%	0%	4.5%
Team Mgmt*	0%	5%	9.5%	5%	19.5%
Total	14%	19%	52%	15%	100%

*Denotes the combined effort of top management, human resource management and functional management.

It is clear from the above table that expatriate career development receives high level attention, with close to half the respondents citing top management involvement. Again, the percentages do suggest a higher rate of participation by Asian and Singaporean top management due probably to the recent internalization drive. For the Americans, because of the long experience in expatriation, the planning function has been delegated to the Human Resource and functional department managers. Also worth noting is the high percentage (23.5%) registered jointly by top and human resource management in planning expatriate career development. It could be a possible indication that human resource practitioners have begun to be involved in strategic management areas. Another interesting finding from this study revealed that MNCs from Europe and Asia tend to develop their career development plans at the overseas subsidiary locations. This could be due to the fact that companies begin to realise that to be global, they must also be 'local' and accord due importance to the national context.

Research question 3: What are the key features of an expatriate career development plan?

Table 3
Major Features of Companies Career Development Plan for Expatriates (By Continent)

Features of Expatriate Career Development Plans	America		Europe		Asia (excluding Singapore)		Singapore		Overall	
	Mean*	Std. Deviation	Mean*	Std. Deviation	Mean*	Std. Deviation	Mean*	Std. Deviation	Mean*	Std. Deviation
Extensive cross-border relations training	4.00	1.00	2.00	1.15	3.27	1.27	2.33	2.08	3.00	1.41
Promotion before overseas assignment	2.00	1.00	2.25	0.96	2.55	1.51	2.33	0.58	2.38	1.20
Promotion to key positions upon repatriation	3.67	1.15	3.25	1.26	3.36	1.21	3.00	1.00	3.33	1.11
Higher authority and responsibility	4.00	1.00	4.00	0.82	3.64	1.43	3.67	0.58	3.76	1.14
Other overseas assignments	3.67	0.58	3.25	1.71	2.91	1.14	3.67	0.58	3.19	1.12

(* 1= least frequently used..... 5= most frequently used)

The above table presents the findings in response to the above research question and show that cross cultural training (cross-border relations) featured prominently in the expatriate career development plan. A list of five features was given to the companies and they were asked to rate the features from a scale of 0 to 5, where 0 means not used, 1 means least frequently used and 5 means most frequently used. As we can see from Table 3.0, the two most common features among MNCs and Singapore companies are promotion to key positions upon repatriation (3.00 to 3.67) and higher authority and responsibility (3.64 to 4.00). The companies from America and Asia are found to also frequently use extensive cross-border relations training as one of their career development features. Consistent with the origins of most researches, the Americans are aware of the great variety in cultures and thus provide cross-culture training. At the same time, Asian companies from a continental region where cultures differ greatly from country to country, have appreciated the need to provide such training for their expatriates. On the other hand, Singapore companies, like European companies, continue to utilize their expatriate's expertise in giving them more overseas assignments (3.67 and 3.25).

Research question 4: How frequently are such career development plans reviewed?

Table 4 Presents the findings in response to the above question.

Table 4
Frequency Of Expatriate Career Development Plan Review (By Continent)

Duration	America	Europe	Asia(-Sing)	Singapore	Total
Less Than 1 Year	0%	10%	14%	4.5%	28.5%
1 To Less Than 2 Years	14%	4.5%	4.5%	10%	33.0%
2 To Less Than 4 Years	0%	4.5%	29%	0%	33.5%
4 To Less Than 6 Years	0%	0%	5%	0%	5.0%
Total	14%	19%	52.5%	14.5%	100%

The above table shows that expatriate career plans are reviewed at different frequencies; 1 to 2 years for American companies, within a year for some European and Asian companies while others range from 2 to less than 6 years. These could be due to differences in emphases placed by various companies depending on the nature of business, or it could be reflective of the level of stability of expatriate development. However, considering the dynamic nature of international business in the Asia-Pacific region, expatriate career development plans should be reviewed more frequently. The Asian companies surveyed showed a significant percentage of 14% review their expatriate career development plans at least once a year which is indicative of the growing importance of the issue.

Research question 5: How does repatriation issues feature in the career development plan?

Table 5
Measures Used For Effective Repatriation (By Continent)

Repatriation Measures Used	America		Europe		Asia (excluding Singapore)		Singapore		Overall	
	Mean*	Std. Deviation	Mean*	Std. Deviation	Mean*	Std. Deviation	Mean*	Std. Deviation	Mean*	Std. Deviation
Arranging proper job placement for expatriate before return to parent country	4.25	0.96	3.63	2.26	3.60	1.40	3.33	1.75	3.59	1.62
Allowing greater autonomy in decision-making	3.00	1.41	2.38	1.51	2.60	1.35	2.83	1.47	2.56	1.42
Arranging a homecoming event	1.25	1.50	2.00	1.41	1.87	1.55	1.50	1.64	1.71	1.49
Orientation programs to familiarize returning expatriates with changes	2.25	1.26	2.25	1.98	2.80	1.66	2.33	1.97	2.56	1.69
Offer repatriation counseling to family for ease of adjustment	2.00	1.63	1.13	1.13	2.87	1.73	1.83	1.72	2.21	1.68
Early notification of return to parent country	3.50	1.00	2.75	1.83	3.33	1.76	4.17	0.41	3.41	1.56
Exposure to career development plans before repatriation	3.50	0.58	2.63	2.26	2.93	1.67	2.83	2.23	2.94	1.77

(*1=least frequently used, 5= most frequently used)

From the above table, it can be seen that repatriation plans were found to be a major aspect of the expatriate career development program. Generally, all companies placed high emphasis on proper job placement before the expatriate returns to the parent country (3.59). It can also be noted that the European and Asian companies are also involving their expatriates in career development plans before repatriation. With the growth in globalisation, the implication for researchers and practitioners is that perhaps, it is time that greater attention is paid to this area. Existing literature are rooted in the American experience and for cultural and other reasons, may not be entirely appropriate for expatriate career development in Asia.

Conclusions

As expatriate assignments heavily impact on the bottom line of any overseas operations, they must not be viewed lightly. Moreover, the success of any international venture depends to a large extent, on the ability of the expatriate managers to contribute in different socio-economic environments and hence help grow the business. For this, expatriates should be provided a clear direction of their career development, from initial expatriate assignment to repatriation. Companies should begin to translate the importance of this issue into sound business policies in order to facilitate future success and growth of international ventures.

For future researchers, this study may provide the headway into the area of expatriate career development. Of special relevance, is a more focused study on the need to synchronise the strategic objectives of the corporations for overseas expansion with the career aspirations of the individual managers.

The findings of this exploratory study will help to contribute to the body of knowledge in International HRD by way of adding new dimensions of thinking for improving expatriate performance, especially in the dynamic region of Asia, through using the descriptive information (with relevant empirical data) presented in the paper. Results from this study will help in developing new research questions/hypotheses for future research. Future

researchers may find this paper useful for linking expatriate career development issues to other aspects of HRD for effective expatriate performance (specifically in the Asia-Pacific region). The theories of HRD drawn from various disciplines could be used in developing a conceptual framework for studying the expatriate performance improvement (linking training, career development and other non-training issues), which is not available in the current international management literature. This will be a demanding area for research as well as for professional practice in today's dynamic global business environment.

Limitations of the Study

As this study only covers MNCs and local companies based in Singapore, the findings may, to some extent, be influenced by the local environment and therefore may not be representative of progress in other countries.

Due to the current economic crisis in Asia, companies were not very willing to participate in this kind of study, citing reasons of time spent on damage control and confidentiality. The relatively small size of respondents hopefully does not affect the true representation of the population for making some generalisation.

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Influence of Liking and Similarity on Multi-rater Proficiency Ratings of Managerial Competencies

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This study explored the predictive ability of liking and three forms of similarity for multi-rater proficiency ratings of managerial competencies. Liking and perceived similarity emerged as the strongest predictors of ratings for all raters. The pattern of correlations between raters, independent variables, and different competencies suggested there may be differences in rater reactions to certain types of similarity and that the nature of these reactions may vary with type of skill or performance that is rated.

Keywords: Multi-Rater, Proficiency Rating, Liking, Similarity

In recent years, organizations have increasingly turned to multi-rater appraisal as a means to better observe and measure job performance, increase perceived fairness, reliability, and ratee acceptance (Harris & Schaubroeck, 1988; Latham & Wexley, 1982), and buttress the legal defensibility of appraisals (Bernardin & Beatty, 1984). Multi-rater appraisal instruments, sometimes referred to as 360° feedback instruments, have also gained popularity as developmental tools (Noe, Wilk, Mullen, & Wanek, 1997). Multi-rater appraisals provide individuals with information about their job-related knowledge and expertise from several sources including themselves, their supervisors, peers, subordinates, and customers. As developmental tools, such appraisals 1) broaden the evaluative perspective on an individual by using multiple data sources; 2) complement organizational trends toward empowerment and teamwork; 3) promote individual accountability for development; 4) enhance self-awareness and self-objectivity (Tornow, 1993); 5) improve communication between supervisors and subordinates; 6) and are typically inexpensive and simple to use (Borman, 1991).

Some research suggests the use of multi-rater instruments and the feedback they generate can lead to significant improvements in management skills over time (e.g., Hazucha, Hexlett, & Schneider, 1993). In order to understand how multi-rater instruments produce changes in managerial skills, Hellervik, Hazucha, and Schneider (1992) proposed a model that outlines the crucial steps of the behavior change process. The steps include 1) accurately assessing needs; 2) assigning behavioral standards; 3) formulating intentions to reach these standards; 4) learning new knowledge, skills, and abilities; 5) generalizing and maintaining new behaviors in the work environment. These scholars note that, in order to maximize the potential for behavior change, critical requirements must be met at each stage in the model. Because of its inaugural position in the change process model, one of the most important requirements is that appraisal information be accurate and credible.

This study examines the relation between two interpersonal variables, perceived similarity and liking, on multi-rater proficiency ratings. The study of these variables is important because performance ratings in general are susceptible to both intentional and unintentional biases. Biased ratings can affect both the credibility and accuracy of appraisals and the developmental feedback resulting from those appraisals. When appraisal information is perceived as either inaccurate or not credible, the likelihood of its acceptance by the ratee, and its power to guide or motivate managerial development is limited. The increasing use of multi-rater appraisals as performance management tools underscores the importance of understanding how such appraisals may be influenced by factors other than performance.

Similarity and Liking

Recent models of both the appraisal process (Dipboye, 1985) and leader-member exchange (LMX) processes (Ferris, Judge, Rowland, & Fitzgibbons, 1994) have recognized interpersonal variables as potentially powerful factors influencing ratings. One important such variable is interpersonal affect. Affect refers to the degree of interpersonal attraction or like and dislike present in a relationship (Liden, Wayne, & Stillwell, 1993). It is a process distinct from cognition and has been cites as *the* major component of interpersonal relationships (Zajonc, 1980). Research has demonstrated that interpersonal liking can influence performance ratings in a direct and non-inferential manner (Alexander & Wilkins, 1982; Cardy & Dobbins, 1986); indirectly through the attributional processes of the rater (Dobbins & Russell, 1986; Mitchell, Green, & Wood, 1980); and through a schematic effect on the cognitive processing of performance information (Wayne & Ferris, 1990).

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In addition, some research suggests that the degree of interpersonal attraction or liking may be influenced by the extent to which individuals perceive they are similar to others. That is, similarity implies a general agreement in views which people find rewarding (Byrne, 1971). Thus an individual perceived as similar is more attractive (and therefore more liked) and more apt to get positively biased performance ratings.

Recent research has begun to think about and assess similarity in three conceptually distinct ways. One conceptualization, demographic similarity (Turban and Jones, 1988; Zalesny & Kirsch, 1989), reflects the actual similarity of individuals along dimensions such as education level, gender, race, job status, job tenure, and so on. Although some researchers consider these factors unimportant to work relationships (Dienesch & Liden, 1986), others theorize they are critical to understanding organizational behavior (Schneider, 1987). From a cognitive processing perspective, demographic similarity can influence ratings because raters may use different schemas to classify information from similar and dissimilar ratees (Liden, Wayne, & Stillwell, 1993). If performance information is categorized on the basis of age, education, or gender similarity rather than actual performance, this may result in biased ratings. However, research examining the influence of demographic similarity on performance ratings is mixed. Some studies suggest a significant effect (Schmidt & Lapkin, 1980; Turban & Jones, 1988) whereas others indicate no effect (Cleveland & Landy, 1981; Wexley & Pulakos, 1983).

Another conceptualization of similarity, perceptual congruence, has been operationalized as the difference between an individual's self-description and other's descriptions of him/her (Wexley, Alexander, Greenwalt, & Couch, 1980); perceptions of communication frequency (Hatfield & Huseman, 1982); or behavior needed to obtain a merit pay increase (Turban & Jones, 1988). The limited research examining perceptual congruence has found higher levels of congruence related to job satisfaction and performance ratings. No research has examined the relationship between the perceptual congruence of required job competencies and performance ratings in multi-rater appraisals.

A final conceptualization of similarity refers to perceived similarity or similarity in attitudes, values, perspectives, and work habits between individuals. Research indicates perceived similarity can predict quality of LMX relationships (Liden et al., 1993), favorable treatment (Wexley & Nemeroff, 1974), and performance ratings (Pulakos & Wexley, 1983; Turban & Jones, 1988). Although little research has addressed this question, it has been suggested that perceived similarity, because of its attitudinal nature, may be the most potent factor influencing an evaluator's ratings of another individual (Schmitt, Pulakos, Nason, & Whitney, 1996).

Although research suggests liking and similarity may influence ratings, there is still little understanding of when and how these effects occur. The limited and often mixed results of previous research suggest, for example, the influence of similarity may vary by type of similarity, rater, or setting. Moreover, no research has examined the relationship between liking and different types of similarity in multi-rater appraisal settings. The present research examines the extent to which liking and three conceptually different forms of similarity can predict multi-rater proficiency ratings of managerial competencies. The following research questions were examined:

1. Are liking and the three types of similarity significant predictors of proficiency ratings resulting from a multi-rater appraisal?
2. Do liking or the types of similarity vary in their ability to predict proficiency ratings across different competencies?
3. Are there differences in the degree to which proficiency ratings from different rating sources (supervisors, peers, and subordinates) are associated with liking or similarity?

Method

Participants in this study were 142 mid-level managers in a state government agency. Positions included first-line supervisors (13%), second-line supervisors (12%), managers (57%), project leaders (5%), and other managerial positions (9%). Participants ranged in age from 29 to 66 with a mean age of 49. A little more than one-third of the participants (39%) had attained high school diplomas, 27% had some post-secondary training, 7% had associates degrees, 9% had bachelors degrees, and about 18% had graduate degrees. Twelve percent of participants had been in leadership positions in this organization for less than five years, about 30% between five and ten years, and the remaining 48% for more than ten years. The sample was predominantly female (64% female, 36% male).

Procedure

Subjects in this study were management and leadership personnel in a state government agency who had been selected to participate in a developmental assessment. The goal of the assessment was to identify competency strengths and weaknesses of management personnel as a first step in improving leadership and management in this agency. Participants completed a multi-rater managerial development instrument, the Leadership Effectiveness Inventory (LEI). A subset of target individuals (the ratees) rated themselves (n = 23), and were rated by immediate supervisors (n = 23), one or more peers (n = 44), and one or more subordinates (n = 53). Questionnaires were distributed during meetings held with the participants. The purpose of the meetings was to introduce the questionnaire, explain the developmental nature of the assessment, and to answer any questions participants may have had about the process or objectives of the assessment. Respondents were encouraged to complete the questionnaires within two days and return them to the researcher by mail.

Measures

All measures in this study were included in a questionnaire that employees were mandated to complete by the top administrator of this agency. Four independent variables were assessed. Raters responded to a measure of interpersonal liking and measures of three conceptually distinct forms of similarity. The liking scale adapted two items from previous research (Liden et al., 1993; Wayne & Ferris, 1990). These items asked "How much do you like this person as someone to work with" and "How much do you like this individual as a person?" Cronbach's alpha for this scale was .71.

Demographic similarity was measured in terms of discrepancies in gender, age, and educational levels between ratees and raters. Gender discrepancy was coded as the same (1) or different (0). Educational level was coded as high school diploma (1), post-secondary training (2), associate's degree (3), bachelor's degree (4), and graduate degree (5). Educational discrepancy was calculated as the absolute difference between rater and ratee. These scores were reversed so higher scores indicated greater similarity. Age was measured in years. Age discrepancy was calculated as the absolute difference between rater and ratee in years of age. Age discrepancy was transformed into similarity scores by dividing the difference scores by their respective standard deviation and reversing the resulting scores so that high scores indicated age similarity. All demographic scores were summed to yield a single score for demographic similarity.

A four-item scale adapted from Turban & Jones (1988) measured perceived similarity. Items included "This individual and I see work in much the same way"; "This individual and I are alike in an number of ways when it comes to work"; "This individual and I handle work problems in similar ways"; and "This individual and I are alike in terms of coming up with a similar solution for a work problem". The reliability estimate for this scale was acceptable (% = .93). Participants responded to these items along a five point Likert-type scale that ranged from 1 (not at all) to 5 (very much).

Perceptual congruence assessed the discrepancy between ratee and rater's perceptions of the proficiency levels required for technical competence (3 items) and interpersonal skills (5 items). For each competency item, respondents were asked to identify the proficiency required for successful performance in the ratee's job. Raters used a five point Likert-type scale that ranged from 1 (no proficiency) to 5 (very high proficiency). A sixth rating option (don't know) was also available but deleted from computation of congruence scores. Discrepancy scores were calculated as the absolute difference between rater's and ratee's required proficiency ratings. These scores were reversed so larger scores indicated greater congruence.

The dependent variables in this study were ratings of current proficiency for technical competence and interpersonal skills. Technical competence referred to an individual's ability to demonstrate technical proficiency, understand the nature of its impact in their areas of responsibility, and to appropriately apply policies and procedures. Interpersonal skills referred to proficiency in considering and responding appropriately to the needs, feelings, capabilities and interests of others, to provide feedback, and treat others equitably. These two competencies were assessed in order to explore whether certain types of competency ratings, such as those related to interpersonal skills, are more susceptible to affect or similarity influences than other, less person-oriented competencies (e.g., technical skills). For each competency item, respondents were asked to assess ratee current proficiency level using a five point Likert-type scale that ranged from 1 (no proficiency) to 5 (very high proficiency). A sixth rating option (don't know) was also available but was deleted from calculation of proficiency scores. Proficiency scores were combined to yield a single score, calculated as the sum of the ratings for each competency item.

The perceptual congruence and dependent variable measures were assessed using an adapted version the LEI, a leadership instrument designed to be used for management development in the public sector. The original LEI was developed by the U.S. Office of Personnel Management from a government-wide survey of over 12,000 respondents and was subsequently validated by teams of Federal executives, managers, and supervisors. The version used in this

study was modified slightly from the original version. Modifications, where necessary, were limited to changes in the wording of the items to better reflect job requirements and the culture of the agency. No items were added or deleted from the original instrument. This questionnaire required two ratings from respondents: current proficiency of the ratee and proficiency required for successful performance in the ratee's current job.

Analysis

Hierarchical regression analysis was used to examine how the variance in performance ratings was partitioned among predictors and to test the ability of the independent variables to explain the variance in the proficiency ratings. Independent variables were entered as shown in Table 1. Liking was entered first to determine how much variance the similarity variables could account for over and above this predictor. Of the similarity variables, demographic similarity variable was entered first because this represented actual as opposed to perceived or attitudinal similarities. Perceptual congruence was entered last, following perceived similarity, to determine how much variance this variable accounted for beyond the other similarity variables. Bivariate correlation analysis was used to investigate the question of differences in the associations of liking and similarity with different raters or on ratings with different types of competencies.

Results

Research Question 1

The dependent variable in this analysis was a single score representing the summed ratings for both technical competence and interpersonal skills. Hierarchical regression analysis results (see Table 1) indicated that:

1. Liking accounted for a significant proportion of the variance in proficiency ratings (R^2 = .48).
2. The addition of the demographic similarity variable did not increase the variance explained beyond that explained by liking (R^2_{Change} = .00, ns).
3. The addition of perceived similarity to the model increased explained variance 9%, a significant increase (p = .001). The total variance explained by the model at this stage, with liking, demographic similarity, and perceived similarity as predictors was significant (R^2 = .57, p = .001).
4. The entry of perceptual congruence into the regression model increased total variance explained by a 5.4% (p = .001). Total variance in proficiency ratings accounted for by the full model equaled 62% (R^2 = .62, p = .001).

Overall, results indicated that liking together with the three types of similarity accounted for a significant proportion of the variance in proficiency ratings. Significant beta values (p = .001) were found for liking (ß = .40), perceived similarity (ß = .45) and perceptual congruence (ß = .27).

Table 1: Results of the Hierarchical Regression

Step	*Predictor*	R^2 / *Adj* R^2	F_{model} *(df)*	□ R^2	$F_{increase}$ *(df)*	□□
1	Liking	.48	72.25**	----	----	.40**
		.47	(1,80)			
2	Demographic	.48	36.25**	.00	.61	-.06
	similarity	.47	(2,79)		(1,79)	
3	Perceived similarity	.57	34.12**	.09**	16.06**	.45**
		.55	(3,78)		(1,78)	
4	Perceptual congruence	.62	31.64**	.05**	11.03**	.27**
		.60	(4,77)		(1,77)	

□ Each successive model in the hierarchical regression analysis includes the variables previously entered.
□□ Beta values shown were calculated with all predictors entered in the regression equation.
* p □ .01 ** p □ .001

Research Question 2

Results in Table 1 indicate there are differences in the ability of conceptually different types of similarity to predict overall proficiency ratings. Liking in addition to both perceived similarity and perceptual congruence emerged as significant predictors while demographic similarity did not. Similar results were obtained in additional regression analyses examining the predictive power of these variables for the two separate components of the outcome variable (interpersonal skills and technical competence) (see Table 2). Liking, perceived similarity, and perceptual congruence all accounted for unique variance and were significant predictors of proficiency ratings for both competencies while demographic similarity was not. These results indicate there is no substantial difference in the predictive power of these variables across proficiency ratings of different types of competencies.

Table 2: Hierarchical regression analysis examining differential predictive power of liking and similarity types across competencies

		Interpersonal Skills			*Technical Competence*		
Step	*Predictor*	R^2 *Adj* R^2	$F_{increase}$ *(df)*	□□	R^2 *Adj* R^2	$F_{increase}$ *(df)*	□□
1	Liking	.45 .45	66.46** (1,80)	.36**	.35 .34	46.87* * (1,88)	.38**
2	Demographic similarity	.47 .46	2.42 (1,79)	-.12	.35 .34	.50 (1,87)	.07
3	Perceived similarity	.57 .55	18.57** (1,78)	.48**	.40 .38	6.78* (1,86)	.35*
4	Perceptual congruence	.61 .59	8.35* (4,77)	.21*	.45 .43	8.56* (1,85)	.24*

□ Each successive model in the hierarchical regression analysis includes the variables previously entered.
□□ Beta values shown were calculated with all predictors entered in the regression equation.
* p □ .01 ** p □ .001

Research Question 3

The question of whether there are differences in the degree to which developmental ratings from different rating sources (supervisors, peers, and subordinates) are associated with liking, perceived similarity, perceptual congruence, and demographic similarity was explored by bivariate correlation analysis. This analysis correlated ratings for interpersonal skills and technical competence from each rater with the independent variables. Results are shown in Table 3.

Table 3: Correlations between rating by source and independent variables for each competency rated

	Interpersonal Skills				*Technical Competence*			
	Liking	Similarity	Congruence	Demographic	Liking	Similarity	Congruence	Demographic
Supervisor	.56**	.88**	.47*	.01	.47*	.58*	.26	.28
Peer	.60**	.67**	-.18	.10	.47**	.58**	.03	.01
Subordinate	.64**	.60**	.05	-.29*	.55**	.48**	.13	.03

All correlations are one-tailed
* p □ .05 ** p □ .01

Correlations are based on responses from 22 supervisors, 43 peers, and 25 subordinates. The resulting correlations ranged from .47 (p □ .05) to .64 (p □ .01) for liking, .48 (p □ .01) to .88 (p □ .01) for perceived similarity, -.18 (ns) to .47 (p □ .05) for perceptual congruence, and -.29 (p □ .05) to .27 (ns) for demographic similarity. These results indicate the relationship between both liking and perceived similarity and proficiency

ratings are consistent across source of rating and type of competency rated. The results for perceptual congruence and demographic similarity are less straightforward. Perceptual congruence was positively correlated with supervisor ratings of interpersonal skills but not with technical competence. In addition, it had no significant correlations with ratings from either peers or subordinates for either type of competency. Demographic similarity also had no significant positive correlations but showed a negative correlation with subordinate ratings of interpersonal skills ($r = -.29$, $p < .05$). Overall, these results suggest there may be differences in reactions to certain types of similarity and that the nature of these reactions may vary by rater/ratee relationship and type of skill or performance being rated.

Conclusions and Discussion

This study compared liking and three forms of similarity with multi-rater proficiency ratings of managerial competencies. Liking and perceived similarity emerged as the strongest predictors of ratings for all raters, explained unique variance in both interpersonal skills and technical competence, and were strongly correlated with all supervisor, subordinate, and peer ratings of both interpersonal skills and technical competence. The regression results and relatively high correlation ($r = .63$, $p < .001$) between these two variables support the similar-to-me association between liking and similarity. It is possible these two factors may combine to form one 'perceptual package' for raters appraising skills or performance. Results also support observations that perceived similarity may be the most likely type of similarity to influence ratings (Pulakos & Wexley, 1983). In general, these findings were not unexpected given previous research. However, this study did extend the findings to multi-rater proficiency ratings of qualitatively different kinds of competencies.

Although not as strong as either liking or perceived similarity, perceptual congruence was also a significant predictor of ratings and accounted for unique variance in the two competencies rated. This finding supports research cited earlier indicating that similarity in perceptions of job demands is associated with supervisor ratings. On the other hand, correlations between congruence, supervisor, peer, subordinate ratings, and the two competencies rated were mixed. Data showed that 1) perceptual congruence was associated with supervisor ratings of interpersonal skill but not for technical competence; and 2) it was not associated with peer or subordinate ratings for either competency. The findings indicate variations in how different rater react to congruence and suggests these variations may interact with type of skill rated. One possible explanation may be that supervisor-subordinate perceptual congruence about job requirements functions to increase task clarity. This allows subordinates to identify which job behaviors are most important (and most likely to be rewarded), and to focus their energies appropriately (Turban & Jones, 1988). The fact that perceptual congruence was associated with interpersonal skills and not technical competence could therefore reflect the relative importance of interpersonal skills in these managerial jobs. This interpretation further suggests the non-significant associations with peer and subordinate ratings indicate that the views of these individuals about what is important for job performance are not as critical as those of the supervisor in determining ratee behavior. On the other hand, one could expect perceptual congruence to play a larger in predicting ratings in team-oriented or other settings in which peers and subordinates are more involved with identifying and rewarding good performance.

Demographic similarity was not a predictor in any of the regression analyses although is did show a significant negative correlation with subordinate ratings of interpersonal skills. The inverse relationship between demographic similarity and ratings is perplexing. Although some research has found that older ratees are rated less favorably than younger ratees (Rosen, Jurdee, & Lunn, 1981), there was no significant age differences between subordinates and ratees to account for this finding. Nor were there significant differences in age or gender that might explain these findings. Moreover, it is difficult to speculate on the causes of this finding given current research and theory on the role of similarity perceptions in performance ratings. The absence of a similar relationship with technical competence suggests the possibility this finding may be an artifact of the data or a result of common method variance. In any case, these results add to the mix of findings with regard to demographic similarity and argue for further research directed at understanding if, how, and why this type of similarity influences performance judgments.

Summary

Little research has directly examined the interactions of potentially influential interpersonal variables on different raters and types of performance or skill being rated. The present research attempted to explore these issues. Findings

supported previous research identifying liking and perceived similarity as powerful predictors of performance ratings. Data also indicated that supervisor ratings are more closely associated with perceptual congruence than ratings of peers or subordinates. This, together with the pattern of correlations for both perceptual congruence and demographic, suggests (1) there may be differences in raters reactions to certain types of similarity; and (2) that the nature of these reactions may vary with type of skill or performance that is rated.

These findings are important when viewed in the context of multi-rater appraisals. Multi-rater appraisals are increasingly becoming a key component of an organization's performance management strategy (Church, 1998). The central rationale for the use of multi-rater appraisals is that job-related, behaviorally based performance information from multiple sources is a potent force for performance improvement. A key assumption underlying the application of these appraisals is that information from multiple sources will provide more valid and reliable information about an individual's job performance. However, the present research has shown that liking and different kinds of rater-ratee similarity can influence ratings and that this influence by vary by rater or rating task.

In practice, liking or similarity influences on the appraisal process may be difficult to control. For example, it is unlikely that a rater would ever encounter a rating situation in which his or her liking or perceptions of similarity were completed unrelated to ratees or ratings. Because interpersonal factors appear to be intertwined and inseparable from the rating process, it is important to understand that these factors are at work and how they may influence the appraisal process and the resulting information. The implication is that, to better manage the appraisal process, it may be more fruitful to approach raters as individuals in social roles whose feelings and interpersonal perceptions are significant influences on the rating process. In addition, the results of this and other research suggest the value of maximizing rater-ratee perceptual congruence about job requirements. In multi-rater appraisals, facilitating discussions between employees, supervisors, peers and subordinates with the explicit goal of verifying and reaching agreement on job requirements would enhance the credibility and utility of appraisal information. To the extent discrepant views on what is important for job performance have been reduced or eliminated, appraisal information will be better able to direct and motivate performance improvement efforts. Although enhancing perceptual congruence might not eliminate the influence of liking or perceived similarity in the appraisal process, it may help balance the effect of these factors on performance or skill ratings.

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A Cross-Case Study: Revisiting Implementations of the Performance Analysis for Training (PAT) Model

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Five case studies are reported in the literature that describe systematic needs analysis using the Performance Analysis for Training (PAT) model. Using evidence from these reports, this cross-case study seeks more compelling and robust insights about needs analysis. The results of this study highlight differences and similarities in PAT model implementations. The results also provide insights into: (1) the correspondence between the PAT model and the actual needs analysis processes and results; (2) the influence of the organization, the decision-maker, and the analyst characteristics; (3) future practice and research needs.

Keywords: Needs Analysis, Performance

The usual starting point for HRD and training efforts is the analysis of performance needs. The labels for this process include needs assessment, needs analysis, front-end analysis, and performance analysis (Rossett, 1992). The particular meanings of these terms have been debated (Moseley & Heaney, 1994), but each identifies a similar intent: To ascertain performance improvement problems or opportunities. Determining and then addressing performance needs is expected to produce benefits such as increased productivity, profit, satisfaction, and innovation. Given its importance, understanding and improving needs analysis is one strategy for improving HRD and organizational effectiveness.

Problem Statement and Theoretical Framework

Practitioners have available many models that detail processes for analyzing needs (e.g., Goldstein, 1986; Gupta, 1996; Sleezer, 1991; Swanson, 1994). However, the literature contains few systematic studies that describe actual assessment practices in the workplace (Lewis & Bjorkquist, 1992; Tannenbaum & Yukl, 1992) even though many authors have indicated that such knowledge is needed. For example, Hatcher and Ward (1997) stated that because of the rapidity of organizational change, performance improvement professionals need innovative ways to analyze issues affecting performance. Also, Sleezer and Maile's (1997) study of needs analysis showed that HRD professionals used diverse practices and concluded by calling for additional research and model-building aimed at practical needs analysis tools.

A theory-based needs analysis model that has been tested in practice is the Performance Analysis for Training (PAT) model (Sleezer, 1990). Directed toward identifying the organization's performance needs that should be addressed with training, the model includes three components: (a) a conceptual framework with three elements that affect decisions about training needs, (b) a list of the phases and steps involved in the process of determining training needs, and (c) a set of worksheets that detail the phases, steps, and activities involved in determining training needs. The literature contains five case studies that each describe implementation of the PAT model in a functioning organization. Each study provides insight into one needs analysis effort and its context. Table 1 summarizes each case including the impetus for the needs analysis, the analysis level(s), the decision maker role and the analyst. Research-based case studies were implemented in four organizations: a financial services firm (Sleezer, 1991), a vehicle manufacturing division (Sleezer, 1996), a business forms manufacturing division (Kunneman & Sleezer, 1998) and veterinary medicine college (Knorr, 1997). The fifth case, which is a descriptive "how-to" case for practitioners, was implemented in a chemical manufacturing firm's strategic business unit (Sleezer, 1995). The levels of analysis varied across the five cases: one focused only on the organization level, two focused on the organization and the work-behavior levels, and two focused on the organization, work-behavior, and individual levels. Three analysts implemented the cases: Knorr, Kunneman, and Sleezer. Note in one case Sleezer led a team of analysts. As highlighted in Table 1, the combination of organization, decision-maker, and analyst characteristics is unique for each case. Each study served as a single case and resulted in an individual case report as specified by Yin's (1988) case study method.

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Research Questions

This cross-case study reexamined the five case reports of PAT model implementations to answer the following research questions: (1) What is the correspondence between the PAT model and the actual needs analysis processes and results? (2) Whether the characteristics of the organization, the decision-makers, and the analyst influenced the analysis of needs? (3) What insight do the cases provide for future practice and research?

Research Methodology

This study relied on multiple-case design as described by Yin (1988). The methodology has three phases:

1. Design, which involves developing theory, designing data collection protocol, and selecting individual cases.
2. Single-case data collection and analysis, which involves conducting individual cases and writing individual case reports.
3. Cross-case analysis, which involves using the individual case reports to draw cross-case conclusions, modify theory, develop policy implications, and write the cross-case report.

This study focused on the final phase, cross-case analysis. To provide a context, we briefly overview the first two phases, which were completed prior to this study.

The design phase began with developing theory. As detailed in Sleezer (1990), the process included creating a needs analysis model that synthesized both theory and practical knowledge. It also included having three experts in training needs analysis evaluate the model's face and content validity. The outcome, the Performance Analysis for Training (PAT) Model, articulates needs analysis theory, operationally defines a needs analysis process and expected outcomes, and can serve as a logic model for case study research. A logic model stipulates a complex chain of events for an intervention over time and provides a basis for analyzing the data from a case study (Yin, 1998). Yin notes that the conceptualization "reflects the theory of the intervention" (p. 253). In the PAT model, the theory of the intervention is contained in the list of phases and steps involved in the process of determining training needs and in the set of worksheets. Conducting a needs analysis according to the list of phases and steps and the worksheets is expected to produce the following specific outcomes: (a) involve the organization's decision makers in the training process; (b) provide the organization's decision makers with accurate and sufficient information for making decisions about the contributions that training should make to the performance needs of the organization; and (c) provide information useful for the design, development, implementation, and evaluation of training. Rivals to this theory are that the phases, steps, and actions specified in the PAT model are impossible to follow, need to be modified, do not produce in the intended outcomes, or produce unintended consequences. A second theory is specified in the PAT model's conceptual framework: the analyst, the decision-maker and the organization characteristics interact to influence the needs analysis process and results. A rival to this theory is that the characteristics of one element dominate.

The design phase also involved creating a case study protocol and selecting individual cases. The PAT model Worksheets contain the protocol. The worksheets overviewed the project, and contained the procedures and general rules for implementing the PAT model in a functioning organization, and provided a template for organizing needs analysis notes. The case study sites and the analysts were selected based on feasibility and access. Individuals within each organization had negotiated with an analyst to conduct a needs analysis and also had indicated willingness for the project to serve as a case study. The analysts were knowledgeable about the topic. Sleezer had implemented many needs analyses, instructed needs analysis courses, and published articles on the topic. Kunneman and Knorr were doctoral students. Each had an association with the organization. Also, each analyst was willing to conduct the needs analysis using the PAT model and to participate in the research project.

The second phase of the research methodology was single-case data collection and analysis. This step involved conducting individual cases and writing the case reports. With this research method, each case that documented a holistic application of the PAT model in a context with distinct organization, decision-maker, and analyst characteristics tested the model and its theoretical base. Systematically studying needs analysis while implementing one required the analyst to engage in two on-going streams of activity. In one stream, the analyst implemented the needs analysis as prescribed by the PAT model. In the other stream, the analyst collected documentation and impressions about the process and results relative to the research questions and propositions.

The case study methodologies specified by Yin (1988) and by Miles and Huberman (1984) guided the data collection and analysis for the individual cases. While implementing the needs analysis, the analysts recorded notes

Table 1: Description of the Five Cases

Case	Impetus for the Needs Analysis	Needs Analysis Levels	Decision Maker(s)	Analyst 's Name
Specialty Chemical Unit (SC): A strategic business unit of a chemical manufacturing firm.	Decision-makers wanted to identify future training needs for technical workers. The firm's strategic goal of quickly implementing new technology was the driving force for the needs analysis.	Organization Work Behavi Individual	Manager of Human Resources Plant manager	Sleezer
Veterinary Medicine College (VMC): A college in a US land grant university.	Decision makers responded to calls for action to all veterinary educational institutions from professionals writing in journals and speaking at conferences. They wanted to use a needs analysis as the first step in designing a curriculum that reflected customer needs.	Organization	Curriculum developmen t committee consisting of nine faculty members and the associate dean	Knorr
Business Forms Division (BF): A division of a worldwide manufacturer of business forms and business systems design.	Decision makers were implementing an ISO quality system designed to improve performance. The decision-makers requested the needs analysis as the first step in setting up an orientation program for new and current workers.	Organization Work Behavi	Plant Manager Chemical Dept. Manager	Kunnem n
Vehicle Manufacturing Division (VM): A division of a US manufacturer of vehicles.	The decision-maker was planning to implement integrated manufacturing throughout the division. He perceived that middle managers and supervisors knew that changes were eminent, but did not know how to manage in the new environment. He requested a needs analysis that would determine the critical needs for these employees.	Organization WorkBehavio	Director of Manufacturin g	Sleezer, project manager and tw project assistant
Financial Services Firm (FS): A US firm that sold financial processing products and services nationally.	The new training and development manager intuitively knew the training needs and thought that a formal training needs analysis might convince those in power to provide funding for training.	Organization Work Behavior Individual	President VP of Finance VP of Human Resources Training Manager	Sleezer

relative to both streams of action. These notes provided the basis for the individual case reports. The cases emphasized different areas of interest based on the foci of the research questions and propositions. Four cases examined whether using the PAT model in the specific organization produce the predicted results. For three studies, implementing the PAT model was predicted to produce the results specified in the model. The VMC case examined the inclusion of the customer as an element in the PAT model and the usefulness of the project findings for making changes in the veterinary curriculum. Two cases focused on the correspondence between the PAT model and the actual analysis process, and two cases focused on whether the interaction among the model's elements influenced the needs analysis.

Cross-case analysis involves synthesizing the information from the individual cases, modifying the theory, developing policy implications, and writing the cross-case report. This study synthesized individual published case reports to examine multiple implementations of the PAT model in functioning organizations. Systematically examining evidence across cases indicates the extent of the replication logic. According to Eisenhardt (1989), Lee (1985), and Yin (1989), if cases are purposefully selected and multiple cases confirm predictions, then the propositions are supported. However, if a case contradicts the predictions in some way, then the initial predictions must be revisited and retested (Yin, 1989).

Synthesizing the information from the individual cases involved many steps. The first step occurred soon after the all the cases were complete with final reports written. The three analysts met and for the first time discussed the similarities and differences among the cases and the subtleties that they had encountered. Copious notes were taken during the meeting. Then to gain some distance, we allowed six months to elapse. The next step involved going through the files to get them in order. The data for the cross-case analysis consisted of the individual case reports and the notes from the analysts' meeting. After the data were ordered, we took long amounts of undisturbed time to review the information. The previously developed theories provided a template for comparing the empirical results of the case studies. We also developed coding categories based on the research questions and propositions, and we coded the data contained in the individual case reports. Then, we synthesized the coded data, searched for additional patterns to discover what could be learned to share with others, and compared conclusions from the individual cases to determine which information was replicated by other cases. Finally we used our notes to write this manuscript. Throughout the process, we checked and rechecked each other's work.

Findings

We begin this section by examining the findings relative to the PAT model implementations and results. Then we examine the influence of the organization, decision maker, and the analyst characteristics on the needs analysis process and results. We conclude by identifying adaptations to the PAT model.

PAT Model Implementations and Results

In all the cases, a decision maker within the organization determined the importance of a needs analysis project. A key event was the initial meeting between the decision maker(s) and the analyst. The project process and results were negotiated and agreement upon including such specifics as the use of the PAT model, data collection processes, time lines, resources, and reporting results. In some cases, the agreement included what would constitute a needs analysis. For example, in the BF and VM cases, the decision maker and the analyst agreed to begin the needs analysis project by implementing two PAT model phases and to table the third phase until after they obtained results from the first two phases. The VMC case revealed that the group of decision makers responsible for using information from the needs analysis to create a new curriculum was smaller than the group responsible for implementing the changed curriculum.

The iterative nature of the needs analysis process and the involvement of decision makers is apparent in the case reports. Four case reports (VMC, FS, SC, and VM) noted that the needs analysis process was iterative rather than strictly linear. For example, an external reviewer for the VMC case commented "There are multiple ways in which data are solicited. The assessment is an iterative rather than a cross sectional process, and this is good" (Knorr, 1997, p.73). Also, in all cases, decision makers participated in the process. For example, the VM Director commented that he had been involved in planning the analysis, had received in-process reports, and was "on top" of this project. He also appreciated not having to be the subject expert on performance analysis and having his time used wisely.

All three analysts used the worksheets as a guide and a framework for organizing information. For example, the SC team members individually filled in the worksheets and then met to compare notes. "This comparison produced many insights, as team members shared new information, revealed tacit assumptions, and clarified perceptions" (Sleezer, 1995, p. 247).

In each case, the analysts adapted the PAT model and used it to successfully implement a needs analysis project. One VMC adaptation was to add the customer to the PAT model elements. BF and VM adaptations included using information from the second phase of the PAT model to decide where to place the training emphasis. In both cases, the data gathered and synthesized about specific job behaviors resulted in transforming the decision makers sensed need into specific, delineated, and documented needs. The BF and VM cases also began Phase 2 before Phase 1 was complete. For example, the VM Director worked on clarifying perceptions from Phase 1, while the analyst began implementing Phase 2. Also, in the BF and VM cases, the need to implement Phase 3, individual capabilities analysis, was obviated by information that was gained during the first two phases. And in the BF case, the analyst expanded the PAT model's phase 2, Steps 2 and 3 by using a Valpar-2000 job profiling system rather than an analysis method that had been identified by Swanson and Gradous (1986).

The remaining adaptations focus on the PAT worksheets. The BF analyst commented on contextualizing the performance analysis tools and changing the order for actions. He noted that a question in Phase 1, Step 1, "Do the decision makers agree about the purpose and parameters of the analysis? was problematic because the parameters changed with the input of new data. The question was finally answered after Phase 2, Step 3. Similarly, the VMC analyst had insufficient information to complete the worksheets while the needs analysis was in process and so used an iterative approach that involved frequently reviewing previous responses to worksheet actions and expanding or recasting them when additional data or insight was received. He also contextualized the PAT worksheets, which were designed for use in business, to be appropriate for an educational situation. For example, he changed the terms 'training' and 'bottom-line' to 'curriculum revision' and 'goals'.

In all cases, the analyst and the decision maker (s) agreed that the expected results were produced. In three cases, BF, VM, and FS, the organization's decision makers explicitly stated that they were involved in the training process. Further, they received accurate and sufficient information for making decisions about the contributions that training should make to the performance needs of the organization, and information useful for the design, development, implementation, and evaluation of training. For example, the Vice-President of Finance at FS commented that he was ready to deliver the training in-house or find a vendor to deliver the content that had been determined. In the VMC case, the PAT model was modified to include the customer. The needs analysis project was expected to be useful for determining deficiencies in a professional curriculum, to involve the institution's decision makers in the process, and to result in changes to the curriculum. The analyst, the decision makers, and an external reviewer rated the project and determined that the results generally met expectations. One area of interest is the usefulness of the needs analysis findings for making changes in the curriculum. The decision makers rated the aspect as somewhat useful. However, the analyst observed the curriculum change process after the needs analysis project was complete and noted that the decision makers actually made few references to the information gathered from customers. He noted that while the modified PAT model was successful in guiding a needs assessment that produced the requested information; the decision makers made little use of the information; so the needs assessment findings contributed only slightly to changes in veterinary curriculum.

The analyst (s) and the decision maker (s) agreed that the implementation of the PAT model produced positive unexpected results. In three cases, BF, VM, and FS, the organization's decision makers reported that the needs analysis had changed their views of the role of training within their respective organizations. For example, the President at FS commented that he received information indicating a need for organizational restructuring to place training at a more strategic level within the organization. Another unanticipated result was the continued commitment from decision makers to implement the PAT model as a performance tool. The decision makers in the BF and SC cases commented on the usefulness of the analysts as future resources for performance analysis and training and requested the implementation of similar projects at other locations. Finally in all business cases, the decision makers concluded that the performance issues were more complex than they had initially thought and that providing training without considering other work place constraints would likely result in little use of the skills and knowledge.

The analysts in all cases concluded that the PAT model is most economical for guiding large-scale projects, such as reengineering or quality improvement, or for guiding affective projects, such as labor disputes. In such projects, awareness of diverse issues or feelings is critical to a success process and results, and the time and resources needed to implement the PAT model are appropriate given the high costs of poor performance. The PAT model may not be the best choice in less complex situations or when the performance results are relatively unimportant.

Influence of organization, decision maker, and analyst characteristics on the process and results

In each case the organization, the decision maker, and the analyst characteristics interacted to influence the needs analysis process and results. In the BF case, the analyst's experience with the Valpar-2000 job profiling system and his profiling certification influenced the method used to analyze jobs. In the VMC case, two organizational characteristics were influential: the veterinary medicine program had no established goal and the individuals who decided on and made curriculum changes held different perspectives about what the program should accomplish.

In all cases the interaction was as important as the element characteristics in producing effects. The BF case provides an example of how the context influenced the thinking of the analyst and decision maker, who in turn shaped the context: " the first phase, determining where the training emphasis should be placed, was influenced by the addition of new production operators to the organization. The analyst and the manager agreed that the training should be targeted at the production area because it had the most potential for individual and organizational performance" (Kunneman & Sleezer, 1998, p. 9). Interaction was also important in helping the individual stakeholders reach consensus. Such interactions occurred in all the cases. Two decision maker characteristics that interacted in important ways with the analyst and organization were the decision makers' support of the performance analysis and their power to implement both the training and non-training solutions influenced the project. In the VM, SC, BF, and FS cases, the interactions were positive. However, interactions were more problematic in the VMC case when individuals who were not members of the curriculum development committee had little influence on the needs analysis process, but significant influence on the curriculum revision.

Adaptations to the PAT Model

The case studies revealed aspects of the PAT model that worked well and adaptations to make it better reflect actual needs analysis processes and easier to use. Aspects that worked well include the model's components and its transparence. The analysts used the PAT model's conceptual framework, list of phase and steps, and worksheets to guide the needs analysis project. The worksheets provided direction for and a means of recording the needs analysis process and content. Further, they facilitated on-going reflection as the basis for insight. The PAT model components were virtually transparent to organizational decision makers who appreciated the wise use of their time. They were able to participate in the needs analysis projects without the burden of knowing all the details of the PAT model.

Adaptations to the PAT model include changing its name to Performance Analysis Tool, adding a "key population" element and the corresponding worksheets, and adding action planning as specific final step in the process. Another adaptation is to specify that a needs analysis does not necessarily include all three levels and that a work behavior analysis may be needed in order to determine where to emphasize performance. Yet another adaptation is to provide additional descriptive information on how to use the PAT model. The information could include the kinds of iterations to expect in implementing a needs analysis, strategies for gathering the information to complete each phase, strategies for adapting the sequence of actions in the PAT model to fit the context, use of the PAT model on large-scale or affective projects, and the probability of unexpected outcomes.

Answering the Research Questions

The cross-case results provide insight for answering the research questions and for modifying the theory and the PAT model. First, what insight do the findings provide on the correspondence between the PAT model and the actual needs analysis processes and results? In all cases, the analysts adapted the PAT model and used it to guide the analysis process. The adaptations varied across cases, but common themes emerged. One theme was that the process was more iterative and less sequential than indicated in the model. Another theme was that the worksheets were helpful in guiding the project and that they need to include additional information about strategies for using and adapting the PAT model. Yet a third theme was to include 'Key Population' as an element in the model. The PAT model implementations in all cases produced the expected results according to assessments by the analysts and decision makers; however, they also produced unintended positive results. Therefore, the theory of the intervention that is articulated in the PAT model should be modified to reflect the findings. Modifications should also include highlighting the iterative nature of needs analysis, providing additional information on using and

adapting the PAT model, adding 'Key Population' as an element, and describing the unintended results that can occur.

Second, what insight do the findings provide on whether the characteristics of the organization, the decision-makers, and the analyst influenced the analysis of needs? The findings confirm that the interaction of the organization, the decision maker and the analyst characteristics do influence the needs analysis process and results. The interaction was as important as the characteristics. No element dominated. The findings also identified two important characteristics: the decision maker's support for the needs analysis and power to implement solutions.

Third, what insight do the findings provide for future practice and research? Based on the cross-case findings, the PAT model should be modified so practitioners can use it to better guide their needs analysis projects. Future research can provide insights to continue honing the model. Future research could address the limitations of this study by using different research methodologies, researchers, and organizations. Areas that deserve research include determining when it is most feasible to use the PAT model. Because the PAT model requires extensive investigation, information is needed on when an organization benefits by investing in a PAT model needs analysis rather than a traditional, linear model needs analysis, or in taking no action at all. From a broader perspective, research on needs analysis effects from different perspectives is needed. The cases for this study provided information about the short-term results of needs analysis when assessed by the analysts and decision makers. What are the long-term results when assessed using concrete organizational performance measures or external evaluators? Future research could also examine how the capacity that is built while implementing a needs assessment is used. For example, consensus building among employees was an important aspect of needs analysis in the cases that were studied. How can those who are involved capture the process or shared insights to produce additional results?

Conclusions

This study used evidence from five case study reports to obtain more compelling and robust insights about needs analysis. Systematic research on needs analysis can facilitate the continued improvement of needs analysis theory and practice with the ultimate goal of improving HRD and organizational effectiveness.

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Large-Scale Training Needs Assessment of State Government Office Support Workers: A Case Study

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This paper reports on a case study of a large-scale, state-wide training needs assessment of office support/clerical employees in Louisiana state government. To identify the felt training needs, 11,016 surveys were distributed in a single mailing resulting a return of 7,117 completed questionnaires, a 65 % response rate. The paper□s focus is on the methodology, survey instrument development and administration, and how the resulting data was tabulated and analyzed to provided useful reports for HRD.

Keywords: Office, Training, Assessment

Workplace demands for more competent and skilled employees have led to an increased need for training in both business/industry and state government. Numerous studies have been conducted that have assessed the training needs of, competencies required by, and tasks performed by office workers in business and industry. However, little has been done to examine the training needs of government office employees on a large scale (Alexander, 1996; Arney, 1998; Chalupa, 1997; Davis, 1991; Davis, 1992; Davis & Chaney, 1993; Marino, 1993; McEwen, 1997; Zhao, 1996).

Employees of the State of Louisiana are emerging from a long period during which little funding was available for employee training. A new state administration has recognized the strategic value of well-developed human resources. In 1997, the governor of Louisiana established work force development as one of the priorities for his administration. To achieve this objective, several groups were established: the Workforce Commission within the Governor□s office, a Task Force on Post-Secondary Technical and Adult Education, and the Occupational and Training Information System in the Louisiana State Department of Labor. The mission of the Occupational and Training Information Systems is to collect work force data for the Workforce Commission to use in setting priorities and funding decisions regarding training programs.

The first step required in any effective training intervention is a thorough and systematic assessment of workforce training needs. Successful needs assessments provide the basis for establishing the performance improvement value of subsequent training. Because of the highly varied nature of agencies and units in state government and the large volume of needs assessments that have to be conducted, Louisiana State University was contracted to assist in assessing and prioritizing training needs. During the initial funding period (the first six months), this needs assessment project consisted of two phases. Phase I was to identify the current training needs of approximately 12,000 incumbent office support/clerical employees in the state civil service system for all department and agencies throughout the entire state. Phase II was to develop a method for conducting needs assessment for all employees within a state department and to pilot this methodology with two departments (Holton, Bates, Redmann, Wilson, Naquin, & Burns 1997a,1997b, & 1997c.). The second period of funding (a two year period) is a continuation of Phase II which involves identifying the performance training needs of Louisiana state government employees for individual departments based on the methodology developed during the pilot study.

The focus of this paper will be on the large-scale training needs survey of state government office support/clerical workers that was conducted during Phase I of the initial funding period. The paper will cover the objectives of Phase I, the methodology employed to accommodate those objectives, including how the survey instrument was developed and administered, how the resulting data was tabulated and analyzed to provided useful reports for personnel managers. The paper will also explore the implication for Human Resources Development (HRD) training in government and business/industry. Only minimal emphasis will be placed on the actual findings of this large scale, state-wide survey.

Phase I Objectives

The objective of Phase I of the Louisiana State Needs Assessment Project was to conduct a needs assessment to identify current training needs for office support/clerical employees within the state civil service system. The specific objectives were to identify the felt training needs of office support/clerical employees: (1) for all office

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support/clerical employees, (2) by job clusters, (3) for each state department, and (4) for each agency within the departments.

Methodology

Instrumentation

As a first step in the design and implementation of a training needs assessment program, it is essential to properly appreciate and understand the scope of the problem that was to be addressed. To this end, a preliminary series of meetings was held between the Phase I Project Coordinator and various State officials that were identified by the Director of the Comprehensive Public Training Program (CPTP), Division of Administration. These meetings were instrumental in exposing the complexity of job titles, job descriptions, GS levels, and other intricacies of the State Civil Service System. Furthermore, they helped form a foundation upon which the task of identifying office worker classifications that should be surveyed for possible training needs. The overall process required an examination of specifications for office/clerical job titles associated with series 4000 registers (no typing test required of applicant) and with series 4002 registers (typing test required of applicant). Ultimately, 45 job titles were selected for the training needs assessment survey of office support/clerical employees. Based on job descriptions and GS levels, these 45 job titles selected were subsequently grouped into the following eight clusters: Accounting, Administrative, Office Management, Clerical, Secretarial, Transcription, Word Processor, and University Admission.

The next step involved identification of the appropriate content of the survey instrument. Focus groups were employed to determine important areas for inclusion in the training assessment study; a total of eleven focus group meetings were conducted These focus groups consisted of state office/clerical workers representing multiple state agencies and encompassing a wide range of job titles. As a result of the 11 focus group meetings, it was discovered that there was considerable commonality of identified training needs across the groups. Therefore, it was decided that a single questionnaire should be developed. Also, it was anticipated that having one questionnaire would reduce the complexity of managing the distribution, collection, and tabulation of multiple versions of the instrument across the various state government departments and groups of office workers.

Based on the information obtained from the focus groups, a draft of the questionnaire was developed. A panel of experts was employed to review the questionnaire for content and design. A field testing of the survey instrument was conducted with 16 office/clerical workers from the Department of Environmental Quality (DEQ), representing a wide range of job titles and various agencies within DEQ. The volunteers were asked to provide any suggestions or recommendations that would improve the instruments, to check the wording of the items, to make sure the directions were clear and understandable, and to keep track of their time in order to estimate how long it would take the typical respondent to complete the questionnaire. The average time to complete the survey instrument was 15 to 20 minutes.

The final draft of the survey instrument contained a total of 67 items covering nine training topic areas, 3 questions dealing with computer and related technology, space for writing open-ended recommendations and comments, and a section on demographics. The nine topic areas consisted of oral communication, written communication, files/filing, general skills, human skills, personnel issues, understanding general state procedures, understanding one□s own department/agency, and work management skills. For each of the 67 training topics listed, the respondents were asked to use the following scale to indicate how much their job performance would improve if they were to be provided training in the topic listed: 1 = None, 2 = A Little, 3 = Somewhat, 4 = A Lot, 5 = A Great Deal, and N = Not Applicable. The frequency response to this scale was employed in the ensuing statistical analysis to provide a ranking of the relative importance of the various training topics addressed.

In addition to the □pure□ training topics covered above, the survey instrument included a section on computer and related technology wherein respondents were asked to identify the version of listed software used in performing their job. Further, they were asked to indicate their training needs for basic computer literacy, mainframe, a wide range of application software (e.g. WordPerfect, Lotus, PowerPoint), electronic mail, and the Internet by using the following scale: 1 = Don□t need training, 2 = Completed basic training which was adequate, 3 = Need basic training, and 4 = Need more advanced training. The respondents were also asked if they would be interested in being trained to be an in-house resource person to help co-workers with computer software/hardware problems. Finally, in

the demographic section of the questionnaire, the respondents were asked to identify their job title from among the list of 45 job titles surveyed. Additional questions dealt with work location, number of years spent working for the Louisiana state government, the number of years in current position, and level of education.

To reduce overall respondent error rate and encoding errors, a Scantron sheet format was employed for the four-page survey instrument. The respondents were instructed to use a number two pencil to bubble in their responses. A side benefit of using a Scantron sheet format was that the respondents□ time to complete the questionnaire would be lessened somewhat, therefore, it was anticipated that they would spend less time away from their job and would be more likely to complete and return the survey.

To ensure anonymity, respondents were asked to identify their department, agency, and work location only. Upon receipt of the completed questionnaire, the CPTP staff assigned the appropriate organization I.D. number to a questionnaire I.D. code sheet. This Scantron I.D. code sheet was designed to accompany the questionnaire for the purpose of associating the individual questionnaires with the appropriate organizations.

Administration of the Survey Instrument

The staff at the CPTP distributed the questionnaires to contact persons (human resource director or related person) at 272 state agencies. These contact people then distributed the questionnaires to all their office support/clerical workers. The contact people were asked to return the completed questionnaires within 3 weeks. Due to a time limitation, a questionnaire follow-up was not conducted. Of the 11,016 questionnaires distributed statewide, a total of 7,117 completed questionnaires were received. The overall response rate for the State was 65%.

Analysis, Interpretation, and Format of Survey Results

For the eight job clusters representing the 45 job titles, statistical analysis software (the SAS System for Windows, Release 6.11) was employed to: (1) tabulate the scale response frequency for each questionnaire training topic; (2) rank order the 67 questionnaire training topics, based on an assigned score which is the percentage of the respondents that rated that item in either of the two categories of highest importance to job performance (□□Lot and A Great Deal); (3) generate frequency and percentages responses for basic and advanced computer training needs, for training as an in-house resource person, and for demographic information.

To recommend training for the 67 topics, the following criteria were used: If the ranked order score received was 60 % or higher, then there was a perceived Widespread Need for training related to that item; if the score was between 40% and 59.9%, then there was Selected Group Need; and if the score was below 40%, then there was Individual Employee Need for that training item. For example, a score of 66.3 indicates that 66.3 % of the respondents rated the item either as of A Great Deal or A Lot with regard to its importance relative to their job performance. Therefore, this training item would be identified as a widespread need for training.

For the basic and advanced computer training needs recommendations, the need basic training and the need more advance training response categories were reported separately in rank order with the highest need listed first. The demographic information for the global responses (all 7,117 responses) was reported by the eight job clusters and for the 272 individual agencies, the 45 job titles were used. For example, 24 job titles were reported for the Department of Revenue and Taxation; 17 for the Department of Public Safety Services.

Due to the comprehensiveness and large scale nature of this state-wide training needs assessment of office support/clerical employees, the survey findings were delivered to CPTP in the following formats:

1. Global responses, based on all 7,117 completed questionnaires received
2. Per job cluster, based on the eight different groups of job titles
3. For each of the 272 State organizations as identified by organizational I.D. number.

The information provided in the first two formats were for use by CPTP in planning statewide and/or multi-agencies training. The third format was provided to each of the 272 agencies/organizations with a guide/key for interpreting the results.

During the initial funding period (the first six months) two organizations, Department of Public Safety Services and Department of Revenue and Taxation, participated in Phase II where an in-depth performance-driven training needs assessment methodology was piloted (Holton et. al., 1997a & 1997b). The pilot study resulted in a multi-level, multi-dimensional strategic approach that employed both a top-down and a bottom-up strategy. The individual agency reports of the results from the office support/clerical employees survey from Phase I was one of the multiple data collection methods used in the Phase II agency in-depth training needs assessment pilot study.

Findings and Procedural Recommendations

Due to the sheer magnitude of this large scale needs assessment, the findings based on the above analysis will be highlighted in terms of the methodology.

Return Rate

A 65 % return rate (7,117 out of 11,016) is considered to be successful for a one-time mailing of the questionnaire with a 3 week turn-around. Several factors may have contributed to the high response rate. First, the 11 focus groups involved 93 office support employees representing the different job clusters and different governmental agencies. Since the members were asked to provide input in the development of the survey instrument, there was tremendous buy-in. These same employees may have helped to motivate their fellow workers in completing the questionnaire. Second, the instrument was designed to be read and completed easily and efficiently. By having the respondents bubble in their responses on the Scantron sheet format instrument, the actual time to complete the questionnaire was reduced. Third, the rationale section of the instruments was written to motivate the employees to complete the questionnaire by stating that they were being given the opportunity to express their perception of what type of training would help them in improving their job performance. Fourth, insuring anonymity may have also contributed to the return rate. Fifth, advance notice of the survey was sent to those individuals responsible for distributing the questionnaire at their agency.

Examining the return rate for the different job clusters, the largest number of global responses (all 7,117 respondents) were received from the largest cluster of office workers, the clerical group (2,700 questionnaires received). The highest global response rate by cluster was office management, 70.3 % (433 out 616) (See Table 1.). In comparison to the two pilot agencies, the Department of Revenue and Taxation and the Department of Public Safety, the highest number of responses were from job titles representing the administrative cluster. Variation from agency to agency is expected due to the individual mission of each organization.

Table 1
Questionnaire Response Rate by Job Clusters

Job Cluster	No. Sent	No. Received	Response Rate	No. of Job Titles
Accounting	326	182	55.8 %	1
Administrative	1,016	655	64.5 %	10
Clerical	4,274	2,700	63.2 %	8
Office Management	616	433	70.3 %	6
Secretarial	3,217	2,024	62.9 %	8
University Admission	99	46	46.5 %	2
Transcription	86	4	4.6 %	1
Word Processing	1,382	912	65.9 %	9
Missing Titles	161			
Total	11,016	7,117	64.6 %	45

Training Topics

Based on the ranking of assigned score for the 67 questionnaire items dealing with training topics from all 7,117 responses received, the respondents indicated that there were no topics that would have widespread need (a rank order score of 60 % or higher), but did indicate 20 training topics that had selected group need (a rank order score between 40 % and 59.9 %), and 47 training topics that had individual employee need (a rank order score below 40%). The 20 selected group training needs represents the following 7 topic areas: written communication, files/filing, general skills, human skills, personnel issues, understanding your department/agency, and work management skills. The 47 identified individual employee training needs represent all 9 training topic areas.

If statewide, multi-agency, and or individual agency training is to be offered to office support staff in similar job titles, then providers of performance improvement training activities may want to examine the survey findings per job clusters. The findings, from the 7,117 completed questionnaires, indicated that widespread training needs were identified for 5 of the 8 job clusters and these needs were grouped into the following 3 topic areas: human skills, personnel issues, and files/filing. Table 2 list the widespread and selected group training needs by topic areas for all respondents and for each job cluster. The human skills topic area was rated most frequently as a widespread training need. Stress management training, one of the 10 human skills training topics, was ranked first for 4 job clusters (accounting, clerical, university admission, and transcription) and fourth for office management. Oral communication appears to be the least needed training topic for the selected group needs. The identification of training topics by job cluster, as presented here, can also be useful to curriculum planners at vocational business and office training institutions.

Table 2

Widespread (W) and Selected (S) Group Training Needs Identified by All Respondents and by Job Clusters

Topic Area	All	Acc□t	Admin	Clerical	Office Mgmt	Secr	Univ Admis	Tran-script	W.P
Oral communication					S			S	
Written communication	S	S	S	S	S	S		W	S
Files/filing	S	S	S	S	S	S	S	S	S
General skills	S	S	S	S	S	S	S	S	S
Human skills	S	W-S	S	W-S	W-S	S	W-S	W-S	S
Personnel issues	S	S	S	S	W-S	S	S	W-S	S
Understand general state procedures			S		S		S	S	
Understanding one□s own agency	S	S		S	S			S	S
Work mgmt skills	S	S	S	S	S	S	S	S	

At the agency/organizational level, the recommendations for training may differ from the global findings as illustrated in Table 3. The table lists the top 5 items for all respondents, for the Department of Public Safety, and for the Department of Revenue and Taxation.The respondents from the Department of Revenue and Taxation indicated that there were 5 training topics that would have widespread need, 31 training topics that have selected group need, and 31 training topics that have individual employee need. For the Department of Public Safety, 5 training topics were identified as having widespread need, 17 topics as having selected group needs, and 45 as having individual employee need. The two training topics where there appears to be agreement on the rank order (within the top five rankings) are related to human skills: stress management and dealing with difficult people who are co-workers. The remaining top-ranked topics are related to personnel issues, understanding your department/agency, and work management skills. At the other end of the scale, there was agreement that oral communications skills training was required only at the individual employee need level. Overall, these findings would tend to indicate that there is not a strong need to provide the same training to all agencies throughout the State. Therefore, the agency level of rank ordering of employees felt needs for training should be given a higher priority than the global ratings when identifying the appropriate performance improvement intervention at the department/agency level.

Table 3

Rank Order of Selected Training Topics by Office Support Workers

Training Topic	Global	Public Safety &	Revenue Taxation
Stress management/stress relief.	1	2	3
General knowledge of Civil Service Rules.	2	34	1
Dealing with difficult people who are co-workers	3	3	5
Computerized filing systems	4	12	25
Dealing with difficult members of the public	5	34	21
Cross training to fill in for other employees in your department.	13	34	2
How to locate and retrieve information	16	1	8
How to handle multiple tasks.	18	4	4
Decision making skills	14	5	6

Software Usage

With regard to the type and version of software being used by the office support employees in their jobs, the two pilot departments appeared to agree in general with the global responses. When asked what type of computer training they need in order to perform their jobs more effectively, they indicated a need for basic training regarding the departmental mainframe and in some of the newer technology, such as the Internet and e-mail. All three groups of employees agreed on their perceived need for more advance-computer training on one application software, WordPerfect. The remaining 15 advanced computer training needs varied widely; therefore, computer training needs should be identified at the department/agency level. It is interesting to note that the survey revealed that many employees were still using DOS and original versions of Windows. Since these technologies are changing so rapidly and the fact that State government is committed to upgrading technologically, it is recommended that computer training needs be assessed more frequently.

In-House Trainers

To determine whether any of the office support workers would like to be trained as an in-house resource person helping co-workers with computer software/hardware problems, a question to this effect was included in the survey instrument. Almost forty percent (39.6%) of the 7,117 respondents indicated they would like to receive this type of training. Over a third (38.6 %) of the respondents were not interested and 21.8 % responded in the negative because there was someone already trained in their department to serve in that capacity At the departmental level, over half

(50.5 %) of the Department of Public Safety and 28 % of the Department of Revenue and Taxation respondents expressed an interest becoming an in-house resource person.

Implications

The approach utilized and the unique problems encountered in this case study of an unusually large- scale need assessment of office workers may be useful to other organizations in their move to performance driven human resource development. Examples of the unique problems associated with this state government needs assessment were:

- ALL employees throughout the entire state were to be given the opportunity for input.
- 45 different job titles and civil service job descriptions were to be included.
- The reading levels of the office support staff had to be considered.
- Political implications, e.g., all state government departments though out the entire state had to be included in the study.
- This state-wide needs assessment had to be conducted within a six month period.

Effective performance related need-assessments should to be linked to multi-dimensional strategies that include both top-down and bottom-up approaches to collecting information. The wide-scale survey used in this case study did offer an efficient means for surveying an extremely large number of employees in a short period of time. According to Holton (1995), large-scale □felt needs□ training assessment can be effective at boosting morale, but may have minimal success in improving performance. Therefore, the results from a large-scale felt needs survey should not be the only source used for identifying performance improvement training.

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Results Assessment System: From Evaluation to Assessment

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Critics and scholars note that the HRD profession is stuck on a 4-level evaluation model that still doesn't work after 30 years. Practitioners know about the importance of evaluation and, yet, are not evaluating the results of their efforts. As an alternative, the Results Assessment System is firmly grounded in Human Resource Development theory and research. This paper describes the system and critiques it from the perspectives of credibility and practicality.

Keywords: Evaluation, Assessment, Results

Human Resource Development (HRD) professionals achieve results in organizations by developing or unleashing expertise in individuals for the purpose of improving performance-- at the organizational, work process, work group, and/or individual levels. The *Results Assessment System* allows researchers and practitioners assess those results (Swanson & Holton, 1999). More specifically, it directs the assessment of performance, learning, and perception results from HRD interventions and other development efforts sponsored by leaders, managers, and workgroups.

Assessment Problem

Critics and scholars note that the HRD profession is stuck on a 4-level evaluation model that still doesn't work after 30 years. Practitioners know about the importance of evaluation and, yet, are not assessing the results of their efforts (Swanson & Holton, 1999)

HRD has not been a serious performance partner in most organizations, and thirty years of the 4-level evaluation model has done very little to change this condition. This condition leaves top managers and clients typically asking for nothing more than participant reaction evaluations-- 'smile sheets' that do not correlate with either learning or performance. When top managers finally decide to do a serious assessment, it is usually in response to a crisis or to their own judgement that "things have gone awry," and invariably comes too late.

Background

Go to any bookshelf of management or organizational books and look up the word "evaluation" in the index. How often do you think the word is mentioned? We can't find it. Yet, members of the HRD profession consistently talk about evaluation while rarely practicing it in the field. What is going on here? One clue is in the terms found in the indexes of most business books-- words like performance, assessment, and measurement. In contrast, evaluation professionals tend to be consultants who study educational and government programs rather than focus on core organizational performance and processes. We have come to realize that the word "evaluation" evokes a negative schoolhouse picture and the idea of assigning grades to ill-defined activities.

In contrast, the *Results Assessment System* is about assessing results, which is different than evaluation. *Assessment* of results is a core organizational process. In contrast, surveys of evaluation practices in HRD clearly show that HRD practitioners view evaluation as optional (Bassi, et. al., 1996). The well-known 4-level evaluation model (Kirkpatrick, 1994) has failed the profession for a number of reasons (Alliger, et. al., 1989 & 1997; Bassi, et.al.1996a & 1996b; Dixon, 1990; Holton, 1996; Newstrom, 1996; Swanson, 1997). A key failure is its emphasis on "reactions" versus the fundamental performance results of the host organization.

Readers will feel initial comfort with the *Results Assessment System* relative to the familiar *4-Level Evaluation Model*. At first glance they are not radically different from one another. A second glance reveals fundamental, substantial differences in (1) their evaluation and assessment priorities and (2) the completeness of the practical research-based process and tools offered in the *Results Assessment System*.

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Purpose of the Paper

The purpose of this paper is to overview the *Results Assessment System* and to critique it in terms of its credibility and practicality in assessing results from human resource development efforts. The *Results Assessment System* claims that it can be applied to any HRD program in any organization.

Overview of the Results Assessment System

One of the reported strengths of the *Results Assessment System* is that it is an integrated system that is firmly grounded in Human Resource Development (HRD) theory and research. The purpose of this section is to provide an overview of the system, and frame it in the larger HRD development and improvement process. These core concepts provide the foundation for each chapter that follows.

Human Resource Development Process

The process of change and improvement within organizations, work processes, and individuals is fairly universal. While each specialization may have its own vocabulary and variations, the core process does not change much. Human resource development can be characterized as having the five phases (Figure 1).

Almost all of the models of HRD or organizational performance change contain a final phase in which outcomes are assessed. Unfortunately, the final phase is the one most often ignored. It is the final phase upon which this paper focuses.

Figure 1: The Human Resource Development Process

Phase	Description
1-Analyze	*Determine performance requirements and their relationships to HRD interventions.*
2-Propose	*Design strategies and propose appropriate interventions.*
3-Create	*Create intervention components-e.g., design, logistics, program, materials, etc.*
4-Implement	*Implement the intervention-e.g., organization development and/or training.*
5-Assess	*Determine if desired results have been achieved.*

It is also critical to recognize that HRD professionals work their HRD process in context of a host organization. This is illustrated through a 'world view' model of HRD in which the five-phase HRD process is laid in the organization and parallels other organizational processes.

This systems world-view model has value for clarifying the important role of results assessment in HRD. HRD is a means to achieve some larger result in an organization. It is for this reason that results assessment is not optional, for it is the results that impact the organization, and ultimately provide outputs desired by customers. For HRD to be a core organizational process, it then follows that results must be assessed. This model also has utility in keeping the big issues surrounding results assessment in perspective in that the world does not begin and end with HRD.

Familiar models of improvement, change, and development are variations of this core development model. For example, Lewin's organization development model (unfreeze, move and refreeze) is an elementary view of the journey of change with assessment driving the process. It is fun to think of this and related HRD processes from both the individual perspective and the total organizational perspective of moving from and existing place to a new place. Almost all of the HRD models are variations of the core five-phase HRD process and call for assessment of results.

Results Assessment System Components

Results assessment reflects the last phase of the five-phase HRD process. Results assessment can be defined *as determining if desired outputs have been achieved by the HRD interventions.* This book presents a system for assessing results from HRD interventions, called the *Results Assessment System.* The system has four basic components: a *process*, result *domains*, a *plan*, and *tools*. As shown in Figure 2, the process describes the general steps necessary to conduct a results assessment in an organization. It is described in more detail below. Domains define the possible range of results that can be assessed. The plan identifies all the key decisions that must be made to design a results assessment. The tools provide the means to actually measure results.

Figure 2 - Components of the Results Assessment System

PROCESS	What are the general steps necessary to conduct a results assessment in an organization?
DOMAINS	What domains of outcomes should be assessed within HRD?
PLAN	What are the key decisions that must be made to design a results assessment, including outcome domains to assess?
TOOLS	How are results measured?

Results Assessment Process

The core process of the *Results Assessment System* is illustrated in Figure 3. This five-step process view of assessing results provides a simple and direct journey from analysis inputs to decision outputs.

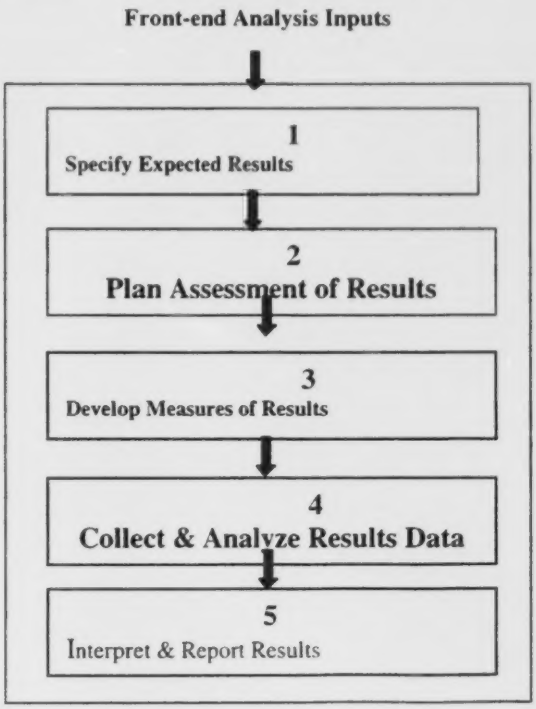

Figure 3

Results Assessment Process

Decision Outputs

Several aspects of this process are worth noting here:

1. To be most effective, results assessment requires strong front-end analysis. It is hard to assess outcomes if the goals are not well defined.
2. This process has an action orientation in that the final outcome is presumed to be decisions about HRD interventions and actions taken to maintain, change or eliminate programs. The purpose is not research.
3. The five steps present a simple and logical progression of activities essential to effective results assessment.

Considerable emphasis is placed on defining expected results and properly interpreting them, in addition to the issues of developing good measures.

Results Domains

The *Results Assessment System* is capable of measuring results within three domains: *performance*, *learning*, and *perceptions*. Each domain has two options within it. These domains and options within *the Results Assessment System* are specified below.

Performance Results are defined as:

System: The units of mission-related outputs in the form of goods or services having value to the customer and that are related to the core organizational, work processes, group/individual contributors in the organization.

Financial: the conversion of the output units of goods or services attributable to the intervention into *money and financial interpretation.*

The assessment of system, mission-related outputs are bottom-line talk. Things like 50,000 cars made; the patient lived, or 5,000 service contracts sold. Those pursuing improvements in an organization face a key dilemma--mission-related outputs. While the focal point is the output goal, the means or driver of that goal may look very different. A simple analogy would be a sporting event in which the goal is to win by getting the ball through the hoop more times than the opponent-- scoring points.

While scoring points and enough to beat the opponent is the mission-related output, there are a wide variety of development actions-- *performance drivers*-- that could be pursued by the coach, assistant coaches, the team owner, the offensive players or strategy, the defensive players or strategy, and/or individual players. Connecting the performance drivers to the system outputs of performance is critical to truly understand performance results.

Without front-end analysis, decision-makers in complex organizations will often implement simple-minded and/or invalid performance drivers that have no real connection to the system performance goals. The book "Witch Doctor's: Making Sense of Management Gurus," by Micklewait and Woolridge (1996), is an extended analysis of the false promises made by well meaning people about their "special brews" *(performance drivers)* without any substantial evidence of their connection to the system outputs *(performance outcomes)*.

Learning Results are defined as:

Knowledge: Mental achievement acquired through study and experience.

Expertise: Human behaviors, having effective results and optimal efficiency, acquired through study and experience within a specialized domain.

Knowledge, an intellectual or cognitive result of learning experiences, is the basic learning result. It is lodged in a person's mind. Measures of knowledge confirm the level of knowledge held by individuals within a particular subject area. In terms of being both effective and efficient, paper and pencil tests are the primary means of measuring knowledge.

Human expertise is the second category of learning -- the more complex learning result category. People with expertise have knowledge and are able to act upon that knowledge. The effective and efficient ability to act upon knowledge generally comes from experience beyond core knowledge. Measuring human expertise requires that an individual demonstrate their behavior in a real setting or a simulated setting. When assessing learning

results, we generally recommend that both knowledge results and expertise results be measured. And, it is logical that knowledge can be measured some time before expertise in that the learner needs time to gain experience. The span of time will vary depending on the complexity of the area of expertise being developed.

Perception Results are defined as:

Participant Perceptions: Perceptions of people with first-hand experience with systems, processes, goods or services.

Stakeholder Perceptions: Perceptions of leaders of systems or people with a vested interest in the desired results and the means of achieving them.

Of the three domains, perceptions have the lowest cost and lowest return. It is lowest in terms of cost in the sense that simple, short, and standardized perceptions rating forms can be produced for participants and stakeholders. It is lowest in terms of return because it provides the least valid information about performance outcomes.

Perception results are perceptual states held by human beings that you are concerned about. Measures of perceptions systematically access this information from selected groups of people. The mantra for perception results domain should be (1) get the data, (2) do not spend a disproportionate amount of resources to get it, and (3) do not over-interpret it. It is recommended that you get this data only as long as it is not used as a substitute for measuring learning results and/or performance results. For example, people self-reporting that they have learned something is not a measure of what they learned. It is also recommend that perception results data from both the participants and the stakeholders be obtained.

Critique of the Results Assessment System

Many times, results assessments that are practical turn out not to be credible (and vice-versa). The challenge is to plan an assessment that is *both* credible and practical. This section discusses the credibility and practicality of the *Results Assessment System* from the perspectives of researcher and practitioner.

Credibility can be thought of as the power to elicit belief. For HRD the *belief* in the Results Assessment System process and outcomes must be elicited from both assessment experts and organizational practitioners. Practicality can be thought of the ability to be used. For HRD the *usefulness* of the Results Assessment System process and outcomes must be elicited from both assessment experts and organizational practitioners. The Results Assessment System purposefully addresses the difficult issues of gaining credibility and practicality approval from both camps.

Framing the System

Big-picture credibility of the Results Assessment System is framed by a four component assessment system (see figure 2) and the positioning of assessment as a 5-step process (see figure 3) that details the last phase of the 5-phase human resource development process. While the presentation of the conceptual integrity of this framework is lean and will likely be criticized by assessment experts, we estimate that it will withstand their criticism. It is important to note that their intellectual reach is from in-depth assessment expertise. With little knowledge of assessment, the critical lens of the practitioners will most likely concern itself with *face validity* and *simplicity*. Practitioners that do not view their work from a process orientation will either have a new realization about the systems nature of their work or experience consternation when they consider the *Results Assessment System*. The popular options for practitioner's are Phillip's overwhelming 18-phase model (1983) and Kirkpatrick's shallow 4-level model (1998).

Consistency and Accuracy

Measures have to possess two key characteristics to be of value: they must be *accurate* and *consistent*. Measurement experts call these two concepts validity and reliability. Measures are said to be accurate if they measure what they are supposed to measure. For example, self-reported measures of performance on the job tend to not be very accurate because people tend to overrate themselves. A consistent measure is one that yields the same results every time it is used. A measure can be very consistent but not valid (measure inaccurately or the wrong thing). For example: a person may be quite consistent in his or her performance rating, but not very accurate.

Measures used to assess performance, learning, and perceptual results need to be both reliable and valid to be of any value. Both reliability and validity are dealt with in the Results Assessment System. In contrast, Kirkpatrick's latest book does not deal with either issue (1998). Neither reliability nor validity are even in his table of contents let alone dealt with dealt with in the text. This is one of the several fatal flaws in the Kirkpatrick model of evaluation. Evaluation practices that do not consider reliability and validity are irresponsible and reckless.

Measurement experts talk about reliability as a pre-condition to actual validity. There are general rules for building in reliability and statistical means of checking it out. The *Results Assessment System* informs readers how to build in reliability and provides minimal guidance as to how to statistically calculate reliability. The guidance in building in reliability should satisfy the critical eyes of both assessment experts and practitioners. As for the statistics, the system defers to the use of standard data analysis programs and this slim presentation will not likely satisfy assessment experts.

Measurement experts talk about three common types of accuracy (or validity). The minimum and most important requirement is that the content of your measure matches the content of what you are trying to measure (content validity). For example, for a performance-rating instrument, the items on the instrument must minimally match what is really required to do the job. This is usually established by subject matter experts and is done logically, not statistically. The *Results Assessment System* provides simple and direct guidance in this realm to gain support from both assessment experts and practitioners.

A higher-level accuracy check is to ask whether the measure really predicts the dependent variable that it is supposed to predict (criterion validity). Thus, we would expect a performance-rating instrument to be able to predict, or distinguish, high performers from low performers. If we find that high performers in an organization have widely varying scores on the performance-rating instrument, then it would not have good criterion validity. An instrument could have accurate content (appear to have the right content) but not be a good predictor, probably because important things were left off the instrument. Again, the *Results Assessment System* informs readers how to establish such validity and provides minimal guidance as to how to statistically determine it. The system them again defers to the use of standard data analysis programs that will not fully satisfy readers who are assessment experts.

Planning Practical Assessments

It is actually easy to plan an assessment that is expensive, difficult to use, and is ultimately not executed and/or utilized. There are so many rival ideas about evaluation and measurement that it can very quickly become confusing. In fact, the primary reason for the six-option results menu of the *Results Assessment System* is to reduce the overwhelming number of options that experts in measurement and evaluation put before us. This framing of the options to six makes assessment work manageable from the very beginning. Creating an endless assessment options list causes confusion that almost immediately threatens the principles of practicality and credibility.

Many professional evaluators forget that the job is not evaluation, but that job of measurement and assessment to be help in getting something more fundamental done—producing results. Having too many options partially explains why many newcomers to measurement say that "it costs too much" or "it takes too much time" and why simple, inadequate schemes are attractive and usually selected by them. The 1-page *Results Assessment Plan* of the *Results Assessment System* chapter guides the basic decisions that will help researchers and practitioners build a measurement system to meet their desired ends. This critical tool, as much as any in the *Results Assessment System*, is pivotal in getting the in reining in both scholars and practitioners through the thinking and doing aspects of assessment. This important tool will contain assessment experts and be a stretch for practitioners.

Use of Existing Measurement Systems

Typically HRD professionals begin an intervention assuming that everything they need has to be created from scratch. According to the *Results Assessment System*, the truth is exactly the opposite, particularly in the performance domain.

The *Results Assessment System* works under the assumption that if the intervention is targeted at real performance-related needs that are important, the chances are very good that someone in the organization is already measuring it. The closer assessment systems are to established organizational measurement systems, the more likely they are to last. This practical feature of the system should be received positively by both assessment experts and practitioners.

Degree of Accuracy Required

According to the *Results Assessment System*, the purpose of results assessment is to enable the organization to make sound decisions about interventions. The level of accuracy needed for organizational decisions is considerably less than that needed for research. The task is to find the "sweet spot" on the accuracy continuum so as to buy enough accuracy to slightly exceed management expectations needed to earn maximum credibility. If you buy more accuracy than that, you are wasting resources.

For example, consider an organization development program that is likely to return the typical financial return of 800% in a year or less (Swanson, 1998). Will it really matter to management if your measure is off by 50 percentage points, that is, you report 750% or 800%? Will you make any better decision about the program if you knew the return was actually 800%? If the answer is yes, then pay for that degree of accuracy. If the answer is no, accept less. Often, giving up a modest amount of accuracy will save considerable resources.

This concept of degree of accuracy will be discomforting to both assessment experts wanting "accuracy" and practitioners fearing "mistakes." In both cases, experience will likely be the mediator.

Results Versus Formative Measures

Evaluation professionals may assess inputs, processes, or outputs. For example, evaluators conduct formative evaluations during program pilot tests to assess effectiveness of a revised work process. While this is very valuable, the point is that evaluation models allow evaluators to skip measuring results! In fact, a popular 4-level evaluation scheme in clearly gives permission to practitioners to not measure results (Kirkpatrick, 1998).

To the organizations in which development is embedded, it is results that are paramount. All of the learning process and in-process perception measures are important, but are only important to organizations if they are *combined* with result measures. Thus, the *Results Assessment System* does not incorporate more formative measures because they are well handled elsewhere, not because they are not valued. Both assessment experts and practitioners should value the system's focus on the commonly overlooked domain of results.

Conclusions

The *Results Assessment System* is a fully developed assessment system for the Human Resource Development profession. It provides a theoretically sound alternative to the atheoretical tools and models that presently dominate professional practice. While the *Results Assessment System* is essentially a guide for practitioners, it holds promise as a useful research tool.

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Examination of Critical Issues for Development and Implementation of Online Instruction

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This descriptive and exploratory study examined several critical issues affecting the development and implementation of online instructional programs. The intent of the study was to (a) help online program instructors, administrators, instructional designers, and technology developers understand the unique challenges and opportunities presented by online instruction; and (b) expand the base of knowledge regarding this new form of instructional delivery. The study has direct implications for online program development in HRD.

Keywords: Distance Learning, Online Instruction, Instructional Design

A primary goal of university level Human Resource Development (HRD) programs is to prepare professionals for leadership roles in HRD. HRD units in corporate America are responsible for employee training and professional development, with billions of dollars spent each year on education and training services. The importance of HRD has heightened in recent years due to technological advances in the workplace, concerns about the quality of education possessed by entry level employees, and the change toward more participatory organization structures and management practices. Efficient and effective training and development of the workforce is critical for helping corporations of all sizes adapt to change and remain competitive. Consequently, demand is high for well-trained HRD professionals who can effectively manage a wide variety of HRD roles and functions.

As the importance of private sector training continues to grow, a parallel growth in the need for professional development opportunities is evident. While most university HRD programs offer master and doctoral degrees in HRD through on-campus programs and traditional off-campus delivery means (e.g., distance education using television or audiographic systems), there is an increasing need to reach prospective students who are unable to commute to campus or participate in traditional remote offerings. To better serve the large numbers of working HRD professionals who desire professional development and advanced degrees, graduate programs are starting to create Internet-based courses that reach the widely distributed off-campus audiences not being served through traditional delivery methods.

Numerous issues must be addressed when developing and implementing online instructional programs. Some of these issues include factors that directly affect learner performance such as the knowledge and skills one brings to the instructional environment and the technologies used to deliver and support the instruction (Rothwell & Kazanas, 1998). Other issues of equal importance are the need to develop faculty skills in instructional design and technology use (Threlkeld & Brzoska, 1994; Willis, 1994), providing instructional technology training for the students who enroll in online programs (Willis, 1993), and establishing a technical support system to address the needs of both the instructors and the students (Willis, 1993, 1994).

Problem Statement

Although online instruction is gaining prominence in the delivery of advanced HRD degrees, little theoretical or empirical research has examined the critical issues affecting the development and implementation of online HRD graduate programs. To address this need, a descriptive and exploratory study of an online HRD Master degree program at a large Midwestern university was conducted in 1998. The purpose of this study was to (a) help online program instructors, administrators, instructional designers, and technology developers understand the unique challenges and opportunities presented by online instruction; and (b) expand the body of knowledge regarding this new form of instructional delivery.

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Research Questions

The following questions guided this examination of critical issues for online instructional development and implementation:

1. What technologies are used for online instruction?
2. What technical knowledge and skills are needed by students, instructors, and program developers to successfully participate in online programs?
3. What training is needed by students and instructors before and during their participation in online programs?
4. What are the technical support needs and requirements of online programs?

Review of Literature

Rapid developments in information technology have made possible a new method of distance education called *online instruction*. Online instruction can be defined as an innovative type of instruction that is delivered to remote audiences over the Internet (Khan, 1997). The Internet provides an opportunity to develop new learning experiences that were not possible previously (Alexander, 1995). One of the advantages of online instruction is that information/content can be delivered to any computer that has access to the Internet, anywhere and at any time. Harasim (1989) argues that online education is more than a new delivery mode. It is a learning domain that enables learners to engage in learning interactions more easily, more often, and perhaps more effectively, but also results in qualitatively new and different forms of educational interactions (p. 62). Even though online instruction is being rapidly adopted by many educational institutions and businesses to deliver instruction (ASTD, 1997), little is known about the critical issues that affect the development and implementation of online graduate programs. From the program developers perspective, a new understanding of these issues is critical for the development and implementation of quality online instruction.

One important area of online development and implementation neglected by research is the degree of technical knowledge, skills, resources, and support needed by students, instructors, and program developers. Even though technology is becoming very popular, the use of computers for instructional purposes is still not widespread and the lack of knowledge and skills in relation to hardware and software issues can create much frustration (Hill, 1997). The lack of knowledge and skills for online participation and development leads to the need for training. In this respect, the training of students and instructors has received some attention from researchers. Instructors must be trained, not only to use the technologies, but also to apply the technologies to their instruction (Franklin, Yoakam, & Warren, 1996). Also, because technologies must be updated to capitalize on new capabilities, skills must also be systematically updated to maintain the user's ability to employ the evolving technologies. Franklin, Yoakan, and Warren (1996) conclude that instructor development and training contributes more to an online system's success than any other factor. Beyond the instructors, the program developers and technical support staff also need to be well trained because the quality of an online program depends greatly on the expertise of the development team.

Methodology

This descriptive and exploratory study examined critical issues affecting the development and implementation of an online HRD masters degree program offered by a large Midwestern university. Started in June, 1998, the online program consists of a series of eight courses in human resource development and is being taught to a geographically dispersed cohort. The online graduate program was designed for individuals currently working in, or aspiring to, positions in human resource development.

Program Participants

A total of 23 individuals, mainly HRD professionals from corporations in the Chicago area, comprised the student body for this online cohort program. Though most students were from the Chicago area, one resided in Connecticut and a second was based in Georgia. Most students had considerable work experience in human resource development, with an average of over 4 years HRD-related employment. The participants had strong educational

backgrounds with some of them pursuing their second masters degree. Demographically, the students were a very diverse group (i.e., 17 females/6 males; 5 minority students; age range from 25 to 50).

Data Collection and Analysis

A multi-method approach was used to identify issues affecting the development and implementation of online instruction. Data were gathered in this study using a wide range of methods including in-depth interviews, surveys, observations, and document analysis. Specific data sources included personal notes from participants, minutes and notes from project team meetings, and electronic data records (e.g., e-mail messages, WebBoard archives, IRC Chat logs, and synchronous activity logs).

Technology resource analysis. An examination of the technology resources required by online students featured analysis of hardware, software, and support systems necessary for participation in the program. The analysis of this area included a comprehensive "environmental scanning," a canvassing of comparative software reviews conducted by independent organizations, an inspection of computer system requirements for the software chosen for the online program, and testing of various hardware configurations to assess respective performance levels.

Technical knowledge and skill requirements. One goal of this study was to determine the technical knowledge and skills needed by instructors, program developers, and students who are involved with online instructional programs. To identify the technical knowledge and skills required by online instructors and program developers, two different methods were used: "environmental scanning" and in-depth open-ended interviews with key informants. Online programs identified through the environmental scanning were analyzed from a variety of perspectives, including the type of technology and communication tools used, instructional design approaches, synchronous and asynchronous activities, and course web design and navigation interfaces. Data regarding the knowledge and skills needed by instructors and program developers were supplemented with data obtained from open-ended interviews conducted with program participants, instructors, and developers.

Two methods were used to determine students' needs: observations and open-ended interviews. Three beta testers were observed while they navigated the course web site, completed exercises, and participated in synchronous and asynchronous activities. A checklist guided the observation process. This observation instrument was developed based on an in-depth analysis of the class web site and a list of tasks and procedures students would follow to participate in the online class. Once the beta testers finished reviewing the online course, they were interviewed to assess various aspects of their experience. Data from the observations and open-ended interviews revealed the knowledge and skills needed to successfully perform in the online program.

Training needs analysis. Structured surveys and document analysis were used to identify the training needs of students. The structured survey was used as a diagnostic tool that was completed by students prior to the start of the online class. Data from the structured survey of student training needs were analyzed using common statistical analysis. Documents collected during the program delivery were analyzed using a document analysis form. The researchers coded the related documents by relevant topic and different training needs. Observations and open-ended interviews were used to identify the training needs of the instructors. Specifically, the "participant as observer" approach was used (Creswell, 1994). Data revealing the training needs of instructors prior to and during the online delivery were obtained from observation notes kept by the researchers.

Technical support analysis. Strongly related to the analysis of technology resources is the technical support provided by the program. The difference in these variables, however, lies in the depth of analysis being conducted. During this phase of the study, the focus was on the forms of support services provided by the online program, how they were used by the stakeholders (e.g., toll free phone support, chat spaces, e-mail, Instant Messenger, personal visits, etc.), and the nature of the problems encountered (e.g., types of problems and their solutions). These data were in the form of descriptive narratives, frequency counts, recurring theme/category depictions, and frequency of occurrence mapping.

Results and Discussion

The results of this study are summarized in four sections that address critical issues for the development and implementation of online instructional programs. The issues deemed most critical include the technology resources used in online programs, the knowledge and skills needed to participate in online programs, training issues that need to be addressed by program developers, and the type of technical support that should be provided. Collectively, the following information can guide the development and implementation of online instructional programs.

Technology Resources Used in Online Programs

Appropriate technologies must be selected in order to achieve full and effective participation by online students and instructors. Based on a combination of (a) environmental scanning, (b) canvassing of software reviews, and (c) hardware requirement inspections and configuration tests, the following analysis identifies key technologies that support online program development and utilization.

A comprehensive analysis of online programs implemented by universities located in the United States and abroad was conducted. An analysis of over 150 online instructional programs and courses was carried out to identify common practices for course design and technology utilization. Based on this review, several conclusions can be made:

1. Email and web-based technologies form the core of most online courses.
2. Few online programs currently utilize audio and video conferencing technologies.
3. Few online programs use proprietary technologies in the delivery of their courses.
4. Most sites use technologies that conform to open industry standards (i.e., W3C standards).
5. On the minority of sites that utilized them, a blend of multimedia technologies were employed, such as streamed video clips and a modicum of animation and applets.

Once the basic technologies were identified from the environmental scanning, an analysis of independent software was conducted to determine the best software for utilizing these technologies. Based on that analysis, it was possible to conclude that the most applicable software for future online programs are:

- Eudora Pro 4.0 (e-mail)
- RealPlayer 5.0 (multimedia)
- Netscape 3.x or Internet Explorer 4.x (web browser)
- AOL Instant Messenger 2.0(paging/messenging)
- Winsock FTP LE 95 (file transfer)
- Microsoft Office 97 (production)
- Acrobat Reader 3.0 (document sharing)

To further identify technology resources appropriate for online programs, technology reviews in online and paper-based industry publications were examined. Several trends from these reviews were apparent:

1. With little surprise, industry standard software, such as Microsoft Office and Netscape's Communicator, are viewed as the best, or near the best, in their respective categories.
2. Cross-platform availability, reliability, cost, ease of use, and customizability are central factors common to most technology review/selections.
3. Compliance with accepted industry standards, accessibility support, and advanced features are occasional factors in the reviews.

Hardware configuration requirements. To ensure that students use computer systems capable of supporting the technologies selected for use with online programs, all technologies listed above were reviewed for hardware specification requirements. These requirements were developed based on tests using multiple hardware configurations to measure performance levels and to develop final recommendations and requirements. The minimum and recommended specifications for a Windows-based system are shown in Table 1.

Table 1
Minimum and Recommended Systems for Participation in Online Programs

Minimum Configuration	Recommended Configuration
• 486process running at 100 MHz	• Pentium 166 MHz Processor (or faster)
• 16MB RAM	• 32MB RAM
• 200MB available disk storage*	• 200MB available disk storage*
• 14.4 modem	• 28.8 modem
• 16-bit sound system	• 32-bit sound system
• 4x CD-ROM	• 12x CD-ROM

Note. * Storage space estimates the amount of space required to store all of the applications (Microsoft Office, etc.) and the work/data files generated by the students during the course of the program.

Technical Knowledge and Skills Needed to Participate in Online Instruction

Building on the technologies identified for online instruction, key informants, instructors, and program developers were interviewed to determine the knowledge and skills required to use the selected technologies to support their role as instructor, program developer, or learner. Also, three beta testers were observed and interviewed. Results are presented below in two parts: (a) the knowledge and skills required to develop and conduct online instruction and (b) the knowledge and skills required to participate in online programs.

Knowledge and skills required by developers and instructors. The development of online instruction requires that both the instructors and the program developers know basic operation of word processing and presentation software, multiple web browsers, and HTML editors. In addition, program developers need advanced knowledge and skills for creating multimedia files, to transfer files from development machines to servers and, for some online programs, the ability to design database systems using software such as ColdFusion or Microsoft Access. For synchronous activities, developers and instructors also need to be able to broadcast and archive live audio and use text chat to interact with students. Additional skills include the management of e-mail and threaded discussion group software as well as chat functions. Possessing the knowledge and skills needed to implement these functions are very important for program development, management, monitoring, and troubleshooting. Table 2 provides a summary of the specific knowledge and skills required by instructors and program developers, by phase and by application.

Knowledge and skills required to participate in online programs. Data from observations and open-ended interviews conducted with the three beta testers revealed that to fully participate in an online instructional program, including both synchronous and asynchronous sessions, students should have basic skills in using web browsers, threaded discussion groups, and e-mail applications. Table 3 presents a summary of the specific knowledge and skills needed to effectively participate in online delivery.

Training Needs of Online Students and Instructors

The following description of training needs of students and instructors was derived from data collected through use of a structured survey, interviews, and electronic data archives. In addition, numerous experiences were gained through the development and implementation of an online degree program in HRD over the past year. The following section identifies the training needed by both the students and the instructors of online programs.

Training needed by students. An analysis of the online students' technology resources and capabilities was conducted to determine if the students in the program had adequate computer resources and the skills needed to participate in online instruction. Based on this analysis, technology training was clearly the type of training most needed by the majority of the students. For example, most of the students did not have the skills necessary to download software from the Internet or use a Web Browser to conduct searches or install plug-ins to play multimedia files. Specifically, training was needed in advanced uses of web browsers and use of communication tools such as e-mail and WebBoard. In addition to providing training on the use of the new technologies for online instruction, the students needed to be trained to install software and troubleshoot problems when they occurred.

The necessary technology training was provided in several forms First, an orientation session was designed and implemented during the first class session. Computer applications and tools used for the online instruction were presented and explained in order to familiarize the students with the technology. Second, before the beginning of the course, the students were required to complete an orientation assignment located on the course web site. The assignment included tasks that helped the students gain the necessary skills needed to participate in the online class, such as sending e-mail attachments, posting messages in WebBoard, and listening to audio files. The third form of technology training involved hands-on practice with the specific technologies to be used by the students. Step-by-step explanations were integrated into the instruction early in the course and students were encouraged to practice using the new technology.

Technology training was perceived as a way to avoid frustration, wasted time, and potential dropouts. Technology training was also perceived as a critical event to be accomplished before presenting actual course content. Training is critical because the online students want to be confident in using technology before they engage in the learning the content. The students perceive technology training as a way to be better prepared to learn the content.

Training needed by instructors. The instructors and teaching assistants involved with the first two online courses in the program were asked to identify the type of training they needed prior to and during their participation in the online program. Different types of training needs were identified prior to the start of the online program, including (a) orientation training, (b) communication-skills training, and (c) technology usage training. The

instructors indicated that if a good orientation training program was offered prior to the start of the online program, training during the courses would not be as necessary unless there are changes or updates in the technologies being used.

Table 2
Technology Knowledge and Skills Required by Program Developers and Instructors

Software Function	Software Applications	Specific Knowledge and Skill Requirements	
		Program Developers	Instructors
Document Creation	Word Processing	Create and format documents using tables and borders. Convert documents to HTML file	Create and format documents using tables and borders Convert documents to HTML file
	Presentation Software	Create instructor presentations, use templates, add clip art, print, and record narrations. Create presentations for use on the Internet	Create instructor presentations, use templates, add clip art, print, and record narrations. Create presentations for use on the Internet
WWW Access	Web Browser	View and navigate WWW, use search tools and bookmarks, use plug-in to play multimedia files, and download programs from Internet.	View and navigate WWW, use search tools and bookmarks, use plug-in to play multimedia files, and download programs from Internet.
Communication & Collaboration	E-mail	Create, forward, and reply to messages and send attachments. Sort incoming mail and create mailing lists	Create, forward, and reply to messages and send attachments. Sort incoming mail and create mailing lists
	WebBoard	Post, delete, and attach files to a message and participate in chat sessions	Post, delete, and attach files to a message and participate in chat sessions
	RealEncoder	Broadcast live audio and archive audio files	Broadcast live audio and archive audio files
Web Page Development	HTML editors	Create and edit Web pages. Use templates, forms, images, multimedia files, and advanced HTML tags	N/A
	Database	Write and test scripts to create and maintain online grade books	Provide grades and feedback and download students' assignments
	File Transfer	Upload and download files to the course server	N/A
Multimedia Development	PhotoShop	Create and edit images	N/A
	Digital Video	Create and edit streaming video	N/A
	Scanning	Scan texts and images	N/A

Table 3
Technology Knowledge and Skills Required by Program Participants

Software Function	Software Applications	Specific Knowledge and Skill Requirements for Participants
Web Access	Web Browser	View and navigate WWW, use search tools and bookmark, use plug-in to play multimedia files, and download programs from Internet
Document Creation	Word Processing	Create, format documents using table and border functions
Communication and Document Exchange	E-mail	Create, forward , and reply messages, and send attachment
		Sort incoming mail and create mailing list
	WebBoard	Post, delete, and attach files to a message and participate in chat rooms
	Various Software	Install, use, upgrade, troubleshoot software
	Database	Submit assignments and access instructor feedback and grades

An orientation training session for online instructors and teaching assistants was considered an essential element to the success of an online course. The following five essential components of an orientation training program were suggested by the instructors:

1. *General overview of the online program.* The first component of an online orientation training program should provide instructors with a general overview of the program, processes involved in using the online instructional system, and how they are supposed to work with instructional designers, web designers, database developers, and technical support. In short, there should be a clear orientation so the instructor understands the structure of the entire program and can better determine their roles and responsibilities. Another element considered important is the organization's vision of the online program as well as its importance to the organization.
2. *Description of the differences between online and face-to-face instruction.* Regarding the differences between these two types of delivery formats, instructors felt that those who have not experienced teaching online should be provided with an introduction to the differences between online and face-to-face instruction. Specifically, the level of detail needed for online delivery and the importance that details play in this type of instruction need to be emphasized. The instructors felt they should be trained on how to adapt face-to-face strategies to online environments. Also, because of the environment in which instruction is delivered, instructors felt they should be introduced to more innovative teaching strategies. In other words, the orientation-training program should provide them with a set of varied teaching options that can be effectively carried out in online environments.
3. *Differences between synchronous and asynchronous delivery.* Training should help instructors better prepare for synchronous and asynchronous delivery formats. For the synchronous sessions, they should be informed about strategies that promote individualized instruction and encourage active participation. For asynchronous sessions, instructors felt they should be prepared to manage time more effectively, learn how to be instructionally flexible, how to provide timely feedback without getting burnt out, and how to create and manage virtual teams.
4. *Communication skill training.* The online instructors felt that oral and written skills are probably much more important in online instruction than in face-to-face instruction. The lack of personal contact and the inability to see people's gestures puts a major burden on oral and written communication. The instructors felt that some information should be provided on how to effectively address online students and how to provide feedback and constructive criticism without being perceived in a negative way. They felt that good online communication skills are necessary because mistakes are more likely to be noticed by online students than face-to-face students. Finally, they suggested that this type of training should provide them with information on how to develop their skills to better interact with students, both formally and informally.
5. *Technology use training.* The instructors and teaching assistants stated that it is essential to know how to use the technology and be able to diagnose and solve common problems. They felt it was necessary to have technology training to get them to the level of feeling comfortable using the technology to interact with people. The instructors felt that they should be provided with many opportunities to gain "hands on" experience. They felt

that the best training is the one that most closely simulates the reality of online instruction. The instructors and teaching assistants recommended that they be provided the opportunity to practice in simulated environments until they attain the level of confidence necessary to perform naturally. One-on-one training was found to be effective in learning to master the new technologies.

Other topics that were mentioned as important for an instructor training program included copyright and fair use issues, institutional intellectual property rights policies, how to foster and assess deep learning, strategies for better preparation and time management, and how to facilitate collaborative learning online.

Technical Support Needed for Online Programs

Technical support is a critical aspect of any online program. Without a mechanism for supporting online instructors and students, frustration is sure to occur. The following listing of technical support for online programs was developed based on an analysis of the types of problems faced by instructors and students as they participated in an online program. This information is organized according to (a) the nature of the technology problems confronted and their resolution, and (b) the forms of technology support offered within the program—both initially and currently.

Nature of technology problems. An analysis of e-mail messages, technical support logs from a toll-free telephone support line, and archives from Instant Messenger communications provided a clear picture of the types of problems encountered by students and instructors, their frequency, and the reporting methods used. During the first online course, 90% (n = 34) of the requests for assistance occurred during the first half of the course. E-mail was the most common method used to report problems and request technical assistance (86% of all requests). Approximately 50% of the students used the technical support services, with an average of 3.5 support requests per student. Regarding the type of problems being reported, the most common problem was associated with an organizational firewall at a students' place of work that affected the delivery of audio and video files and prevented access to collaboration tools such as WebBoard and IRC chat. Other frequently reported problems were related to the lack of web browser skills, inaccurate use of e-mail functions such as attachments, and server problems due to external causes such as severe weather conditions in the form of storms and lighting. During the development of the first course, a total of 11 different types of problems were reported. These were problems related to email, browsers, WebBoard and its chat function, RealPlayer, server malfunctions, technical terminology, acknowledgment of messages and document submissions, and PowerPoint presentations.

An analysis of technical problems during the second online course revealed similar results. In this case, 92% of the support requests were for assistance during the first half of the course. The number of students requesting assistance increased slightly from the previous course, from 50% of the students in the first course to 61% in the second course. During the second course, access problems due to firewall constraints at a student's work location was a common problem, followed by problems with RealPlayer, and difficulties associated with uploading assignments to the course database. The uploading feature of the database was a new feature in the second course. During the development of the second course, there was a decrease in the types of problems reported. A total of 9 different types of problems were reported. These were problems related to the introduction of a new database for uploading documents to the instructor, server malfunctions, PowerPoint files, access to the we site, and access to the WebBoard and ChatBoard due to changes in IP numbers. Three other problems came from new students joining the cohort. These problems were related to the use of speakers, volume, and printers.

Forms of support offered. Given the types and frequency of technical problems from the first two online courses, as well as the prior expectations of potential obstacles, multiple support features were implemented in an effort to reduce the number of technical problems experienced by the online instructors and students. As a result, a comprehensive support system was created for the online program. Initially, only e-mail support and a toll free telephone line to provide access to online staff during normal business hours was provided. While these forms of support were adequate for most technical problems, there were instances where immediate assistance was required during non-business hours. To that end, additional support features were developed and implemented, including a set of Frequently Asked Questions (FAQ) that contain solutions to various problems, the availability of Instant Messenger for 1-to-1 and small group conferencing, and 24-hour chat-based support provided through a "Help Desk" manned by the university's Web Technology Group. With these five support options in place, virtually all of the technological support needs of the online students and faculty can be met satisfactorily.

Summary

This paper examined a variety of critical issues related to the successful development and implementation of online instructional programs. While many of these issues are taken for granted when planning traditional face-to-face instruction, they must be carefully considered when venturing into the realm of online programs. Programs delivered entirely online cannot simply be modifications of existing courses, rather, they must be viewed as completely new delivery systems that present different and unique problems. Online program developers need to carefully analyze the context and source of problems that arise and design appropriate interfaces, technology solutions, and support mechanisms to resolve the difficulties that will be faced by both the instructors and the students.

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The Relationship of Psychological Preferences and the Human Resource Development role of Instructor/Facilitator: A Qualitative Analysis

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The purpose of this ethnographic study was to describe the congruency of psychological preferences identified by the Myers-Briggs Type Indicator (MBTI) and the human resource development (HRD) role of instructor facilitator. This investigation was conducted with 24 HRD professionals who worked as instructors/facilitators in job-related contexts. The study was conducted using such qualitative strategies as purposive sampling, open-ended interviews, group interviewing, participant observation of the subjects at their work sites and while conducting training sessions, field notes, and contact summary sheets to record field encounters. Two major themes emerged in relation to the congruency of psychological preferences and the role of instructor/facilitator: (1) designing and preparing instruction/facilitation, and (2) conducting training and managing group process. These themes were analyzed through the combination of the four Jungian personality functions: sensing-thinking (ST), sensing-feeling (SF), intuition-thinking (NT), and intuition-feeling (NF).

Keywords: Instructor Characteristics, Myers-Briggs Type Indicator, Qualitative Research

As the trend of professionalism in the field of human resource development (HRD) continues to increase (Gilley & Eggland, 1989; McLagan, 1989; Nadler, 1984; Prior, 1994; Sredl & Rothwell, 1992), it becomes crucial that we understand the congruency between the personality characteristics of the HRD practitioner and the practice of HRD. The practice of HRD includes a system of roles, competencies, ethical issues, work outputs, training styles and quality requirements (Bennet, 1994, McLagan, 1989; Sredl & Rothwell, 1992). Despite this increased professionalism reflected in the multiplicity of HRD functions, there is limited research that reports on the topic of personality factors impacting on HRD practice, specifically the instruction/facilitation role

One widely recognized instrument that assesses individual differences based on the personality theory of Carl Gustav Jung is the Myers-Briggs Type Indicator (MBTI). Jung's theory identifies two basic attitudes or direction of energy focus: Introversion and extraversion and four problem-solving orientations or personal styles: Intuition, sensing, thinking and feeling (Fordham, 1975; Hall & Nordby, 1973; Hyde & McGuinness, 1993; Jung, 1971). This study refers to each of these attitudes or orientations as psychological preferences.

Personality research using the MBTI has been extensively conducted in the fields of law enforcement, management, counseling, and other professions (Briggs-Myers & McCaulley, 1985; Hennesy, 1995; Lawrence, 1993). However, no research study was identified that would focus on the congruency or compatibility of psychological preferences and the instruction/facilitation role.

The purpose of this study is to describe and explain the congruency of psychological preferences as measured by the Myers Briggs Type Indicator (MBTI), and the HRD role of instructor/facilitator. The study observed, assessed, and documented how the psychological preferences of HRD trainers influence the way they experience their role and how they demonstrate the role-specific outputs, competencies, qualities and ethical issues.

This qualitative study utilized two sets of theoretical orientations to structure the collection and analysis of data. The first theoretical orientation was the Jungian theory of personality types and the identification of psychological preferences through the MBTI. Jung's (1971) type theory proposed that all humans focus their energy by choosing between two attitudes (introversion or extraversion). He also proposed that a person chooses from two ways of perceiving (intuition or sensing) and two ways of judging what is perceived (thinking or feeling). Myers and Briggs (Briggs-Myers & Myers, 1980) expanded on Jung's theory and formulated a fourth personality dimension to explain how each person deals with the external world. They called these preferences perception or judging. The combinations from these four dimensions reflect a complex dynamic of 16 relationships among the four functions (i.e., sensing, intuition, thinking and feeling), the two attitudes (i.e., extraversion and introversion) and the two orientations to the outer world (i.e., judgment and perception) (Myers-Briggs & McCaulley, 1985). The most important result of this dynamic interaction is that one of the functions becomes the dominant for that particular type

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combination. In addition, an auxiliary, a tertiary and an inferior function play significant roles in the development of a healthy and balanced personality.

The second body of theoretical orientations referred to HRD roles and competencies and the dynamics of adult learning. The practice of HRD is based on learning. Competent HRD practitioners incorporate the principles of adult learning into all phases of training and development activities. A holistic analysis of the training and development context must include the characteristics of adults as learners and the complementary techniques and strategies that should be employed by the training professional in facilitating the learning process.

HRD is a system of key competencies, roles and quality requirements. McLagan has defined competency as an area of knowledge or skill that is critical for producing outputs. Competencies are internal capabilities that people bring to their jobs; capabilities which may be expressed in a broad, even infinite, array of on-the-job behaviors (1993). A role, on the other hand, is linked to outputs (i.e., products or services). McLagan (1993) defines role as "...a functional groupings of outputs. A job title may match a role title, but a job often encompasses more than one role" (p. 77). An example of a key role is that of instructor or facilitator. Selected work outputs of this role include: presenting information, providing feedback to learners, facilitating structured learning experiences, and managing group discussion and group process (Sredl & Rothwell, 1992). Selected corresponding competencies are: coaching and feedback skills, presentation skills, objectives preparation skills, etc.

Furthermore, quality requirements refer to the characteristics of an output. McLagan (1989) states that "quality requirements answer the question What must be true of this output in order for its users and HRD professionals to approve it?" (p. 77). Examples of the quality requirements linked to the learning environment (an output) are: individual differences are respected, the facilitator models behavior consistent with the goals of the program, self-esteem is maintained or enhanced, or individuals feel safe to try new skills and behaviors (McLagan, 1989).

The congruency of psychological preferences and the HRD role of instructor/facilitator can have significant repercussions on the way adult learning experiences are structured and delivered. Thus, HRD practitioners with certain psychological preferences, are attuned to responding to adults as learners in differing ways.

Research Questions

This ethnographic study utilized a general a "grand tour question" (Creswell, 1994; Werner & Schoepfle, 1987) consistent with a qualitative research design. This question was posed as a general issue so as not to limit the inquiry or prevent the researcher from following valuable leads that emerged as the data were collected (Creswell, 1994). The grand tour question of this study was: What is the congruency of psychological preferences measured by the MBTI, and the HRD role of instructor/facilitator?

Two related sub-questions and issues followed this general grand tour question. The sub-questions were more specific but did not put necessary limits on the open-ended nature of this qualitative design. The first sub-question related to the grand tour question was: What psychological preferences (or combination thereof) were more often associated with the competencies and work outputs in this role? Why? The second sub-question for this study had to do with interpersonal relationship skills and the role of instructor/facilitator: What psychological preferences, or combinations thereof, were associated with interpersonal competencies and work outputs? (e.g., negotiation skill, questioning skill, relationship-building skill, etc.).

Methodology

This study utilized a qualitative methodology to compile information on the congruency of psychological preferences and the HRD role of instructor/facilitator. The research design had two major phases which included data collection and analysis. The data collection phase utilized ethnographic fieldwork strategies that included: (1) purposive sampling, (2) administration and scoring of the MBTI form G, (3) participant observation, (4) field notes and contact summary sheets, (5) open-ended interviews and (6) informal group interviewing and discussion. The data analysis phase consisted of examining the data collected in the interviews and field observations through the use of a text-based software program called Folio Views, Version 3.1 for Windows. A total of fifty two (52) codes were used to classify the data collected. These codes were created and evolved as the research progressed and distinct categories of data emerged.

The purposive sample used in this study consisted of 24 HRD professionals who conducted instruction/facilitation in their respective organizations. The sample criteria required that these professionals would currently perform as instructor/facilitator in a staff development or training unit on a full-time basis. Initial contact

was made with 37 HRD professionals for possible participation in this study. The final sample included twenty two participants who worked for the public sector and two that worked for private organizations.

Each study participant was explained the nature of the MBTI and given instructions on how to complete the instrument during a brief interview. An average of seven days was given to each subject to complete the MBTI at their own convenience. The completed instrument was personally collected from each subject and another brief interview was conducted to explain or answer any additional concerns. The scoring and presentation of the MBTI results took place after each research subject had been interviewed and observed during a training session(s). The reason for the researcher and the subject not knowing the MBTI results beforehand was to ensure non-bias in the interview and participant observation process.

This study included direct observations of selected HRD professionals conducting training and/or interacting in the respective work sites. The technique of participant observation proved to be indispensable to observe the interaction between trainers and trainees during actual staff development activities. It also provided the researcher a direct method to validate information obtained during the interviews regarding preferred training strategies and group facilitation preferences. Direct observations of the physical facility and the training environment were also conducted during these visits.

Every encounter between the researcher and the subjects in the study was recorded in the form of field notes. A contact summary sheet was completed for brief interactions such as telephone contacts or brief informal face-to-face encounters. The most productive source of information for this study were the face-to-face open-ended, tape-recorded interviews conducted with the study participants. These interviews were transcribed by a professional transcriber and incorporated as text in the Folio Views program. The 52 codes used to organize and analyze the interview contents were represented as Folio Views "fields" that marked words or strings of words. This coded text was subsequently retrieved for content analysis and for further refinement/regrouping of different categories of data. For example, all paragraphs describing a Sensing (S) subject's ideas of what's important when delivering a training session would be marked with unique codes such as #8 Sensor and #43 Training style – self description. All subsequent observations, interview descriptions, informal group interviews and discussions, etc., related to Sensing types' perceptions of what's important when delivering training would be marked with the codes #8 and #43. The researcher could then do a "search and retrieve" operation where all instances of the combination #8 and #43 will be retrieved from the universe of text entered in the InfoBase.

A variety of data sources (e.g., interviews, participant observations, literature sources, informal group interviews/discussions) were triangulated to achieve a meaningful interpretation of the findings. For example, the findings of the interviews and the actual observations of the subject while conducting training were used to establish congruence between psychological preferences and preferred instruction/facilitation practices. The literature on psychological types as applied to specific professions such as law enforcement, management and teaching also helped in defining and establishing unique areas of concern for human resource development practitioners. Specifically, the literature helped the researchers to identify concrete behaviors which reflected psychological preferences such as focusing on details or the large picture, applying facts to practical results, thinking or feeling approaches to classroom interactions, etc.

The analysis of the data for this study was reported through direct quotations from research subjects or descriptions of situations made by the researcher. The quotes are selected to exemplify and summarize particular aspects of the congruence between psychological preference and training approach. For example, in describing an Intuitive-Feeling subject's approach to conducting training, the following quote captures the personal, people-involved enthusiasm characteristic of the feeler type:

Subject #18 (on conducting the training session): *"So, my approach is very It's mostly I sell myself. **I don't sell the course so much. You are not only getting the course, you're getting a piece of me. So, when I teach any course, I cannot just teach a subject matter. I teach my life. And when you finish, you'll know a little bit about the topic... you'll know here I was born, where I was raised, what I did..."***

Another feeler summarizes her focus on people and not facts:

Subject #20 (on starting a training session): *"I usually my process involves getting to know my audience right away. I ask them what is it that they want to get out of the particular session. And from there, I can even establish my agenda. As a matter of fact, this is my favorite thing. I'll give them a particular topic area and I'll say What is it that you want to learn about this...And then from there, I can be honest about the things hat I do know about it and then use that as my agenda"*

In another example, an Intuitive-Thinker's tendency to be creative and ingenious is captured as follows: Subject #5 (on designing and delivering training): *"I like taking an otherwise boring topic and attempt to sell it to others... It feels good to convince those who are resistant to change, that a particular policy or program is good for the organization..."*

Results, Conclusions, and Limitations

Table 1 shows the distribution of the eight psychological preferences (i.e., extraversion/introversion; sensing/intuition; thinking/feeling; judging/perceiving). Also, shown on this table are the combinations of preferences (e.g., sensing/thinking; intuition/feeling, etc.) that will form the basis for the analysis conducted on the data.

Table 1
Distribution of Psychological Preferences and Combinations Thereof

	I	E	S	N	T	F	J	P
I	-	-	5	2	6	1	5	1
E	-	-	6	11	10	7	8	9
S	-	-	-	-	9	2	8	3
N	-	-	-	-	6	6	6	7
T	-	-	-	-	-	-	9	6
F	-	-	-	-	-	-	4	4
J								
P								

Legend: I=introvert, E= extravert, S= sensing, N= intuition, T= thinking, F= feeling, J= judging, P= perceiving

The Four Functions and the Role of Instructor/Facilitator

The combination of perception (i.e., ways of taking in information) and judgment (i.e., ways of coming to conclusions) will now be used to describe and interpret behaviors and perspectives associated with the HRD role of instructor/ facilitator. Extensive documentation of individual behaviors and comments was made to validate the general descriptions presented below. The page limitation of this paper prevented inclusion of this documentation, but is available from the authors upon request.

Sensing-Thinking (ST) Instructors/Facilitators

In this study, a total of nine (39%) instructors/ facilitators scored as sensors/thinkers (S-T) on the MBTI. According to statistics reported by CAPT (1995), 25% of the U.S. population score with a sensing-thinking preference in the MBTI.

Designing and preparing instruction/facilitation: the sensing-thinking (ST) orientation. Trainers with a sensing orientation prefer to process/intake information from the environment using their five senses and focusing on what is real. Those with a thinking preference make decisions and reach conclusions by using objective, cause and effect reasoning (Briggs-Myers & McCaulley, 1985). STs (as they are called) are practical, matter-of-fact individuals who prefer and enjoy working within a structured plan that follows specific outlines, procedures and/or routine tasks.

Sensing/thinking trainers in this study who described their way of preparing and designing instruction/ facilitation, emphasized behaviors and attitudes characterized as concrete, direct, thorough, structured and factual. Meeting practical needs in a matter-of-fact way was their foremost concern when designing training courses.

Conducting training and managing group process: the sensing-thinking (ST) orientation. The process of conducting training or facilitating learning experiences in an HRD context was the area most intensively explored in this study. The data collected through interviews and observations revealed clear differences and/or similarities among subjects with varying combinations of psychological preferences. Competencies such as presentation skills,

group processing skills, and feedback skills emerged as key elements to understand and explain what goes on in the training context in relation to psychological preferences.
The practical, organized, matter of fact, ST trainers showed a preference to use diverse presentation strategies to get their message across. The use of audio-visual equipment or tools that conveyed a 'real' sense of the material being presented was favored by the STs. Their training style was observed to be structured, detailed and focused on practical applications of the materials.

Sensing/Feeling (SF) Instructors/Facilitators

In this study, a total of two (8%) instructors/ facilitators scored as sensors/feelers (SF) in the MBTI. According to statistics reported by CAPT (1995), 29% of the U.S. population scores with a sensing-feeling preference in the MBTI.

Designing and preparing instruction/facilitation: the sensing-feeling (SF) orientation. Like the STs just described, SF trainers prefer to take in and process information through their senses while focusing on what is real, in the here and now. (Briggs-Myers and McCaulley, 1985). However, their feeling preference leads them to make decisions based on subjective, values-based reasoning. SFs make decisions with consideration to people, values and feelings.

The two sensing/feeling trainers who participated in this study described their way of designing and preparing training by emphasizing facts, details, concrete reality and organization. However, they also demonstrated a concern for practical help and services for people.

Conducting training and managing group process: the sensing-feeling (SF) orientation. As mentioned, sensing-feeling individuals process information through the five senses, focusing on what's real and come to conclusions based on human values and subjective reasoning. The two training professionals in this study who scored as sensors-feelers gave descriptions and displayed behaviors congruent with their psychological orientation.

In summary, sensing-feeling instructors/facilitators tended to emphasize a balance between details, facts and attention to the here-and-now with personal warmth and practical help for people (i.e., trainees). SFs tended to the immediate needs of the training participants and maintained practical and friendly interactions in the training setting.

Intuitive/Thinking (NT) Instructors/Facilitators

In this study a total of six (26%) instructors/ facilitators scored as intuitive/thinkers (NT) in the MBTI. According to statistics reported by CAPT (1995), 18% of the U.S. population scores with an intuitive-thinking preference in the MBTI

The trainers with an intuitive orientation prefer to process/intake information from the environment using possibilities, relationships, a "sixth sense", and a futuristic/long range outlook (Briggs-Myers & McCaulley, 1985). The decision making process of the NTs (i.e., thinking) is similar to the STs previously discussed. That is, they decide using logic, cause and effect and objective reasoning. NT trainers enjoy challenges and complex projects but tend to neglect routine tasks, details, and practicality.

Designing and preparing instruction/facilitation: the intuitive-thinking (NT) orientation. Whereas ST trainers in this study were detailed and focused when describing how they went about designing and preparing a training program, NTs were general and at times gave the impression of being disorganized and scattered in their descriptions. Hennessy states that intuitive-thinkers "communicate in global terms, often skipping steps and appearing to talk in circles" (1995, p. 19). From the interviewer's perspective, it proved a challenge to obtain sequential and detailed descriptions from some NTs, regarding the process of developing training courses or programs.

In summary, when intuitive-thinker trainers described how they designed and developed training courses, the emphasis was on conceptual and detached procedures. They also tended to minimize details and focused on possibilities and the big picture.

Conducting training and managing group process: the intuitive-thinking (NT) orientation. In general, NT trainers resembled STs in their logical, cause and effect, and detached style of conducting presentation. Intuitive-thinking trainers showed a preference for general concepts, theoretical discussions, and the analysis of possibilities and interconnections. In opposition to STs who made themselves and the message they presented real and in the here-and-now, NTs had a tendency to be general and detached. NTs general characteristics have been discussed as

"the etherial mind" (Lawrence, 1993, p. 191). Instead of details and facts, NTs prefer mental models, blueprints or cognitive maps to guide them in their actions.

A final observation about the NTs' style of conducting training and managing group process relates to their global outlook. A tendency was observed among NT trainers to provide general overviews of the training course without mentioning detailed objectives or exact outcomes. Also, the presentation of materials appeared unorganized, however, in the end, all of the intended contents were covered.

In summary, NT instructors/facilitators revealed great similarities with STs in terms of their logical, cause and effect ways of reasoning, judging and coming to conclusions. The unique characteristics of the NTs were their ability to conceptualize and organize information in global and general ways. NT trainers displayed behaviors and perspectives characterized as detached, conceptual, and theoretical.

Intuitive/Feeling (NF) Instructors/Facilitators

In this study a total of six (26%) instructors/ facilitators scored as intuitive/feelers (N-F) in the MBTI. According to statistics reported by CAPT (1995), 28% of the U.S. population scores with an intuitive-feeling preference in the MBTI.

Designing and preparing instruction/facilitation: the intuitive-feeling (NF) orientation. Like the NTs just described, the NF trainers in this study preferred to take in and process information in a global and conceptual manner. When using their 'sixth sense' approach, NFs rely on hunches, speculations and possibilities (Briggs-Myers & McCaulley, 1985). The decision making process of intuitive-feelers is based on social values and concern for people. NFs come to conclusions by emphasizing the personal and humane dimensions of the situation at hand.

Long range training issues and conceptual training schemes and designs caught the attention of NF trainers. The data collected showed that they tended to enjoy people-related issues rather than policy or technical concerns. NF trainers can be insightful and capable of conceptualizing long range goals for the training unit.

In summary, intuitive-feeling training professionals in this study presented themselves as conceptual, future-oriented individuals who were responsive to people needs. These trainers showed real concern for people's feelings and opinions.

Conducting Training and Managing Group Process: the Intuitive-Feeling (NF) Orientation. NF trainers in this study preferred interaction and discussion when conducting training. NFs conducted training from a very personal perspective. Instead of focusing on immediate and concrete situations, they presented the total picture. They also showed enthusiasm and insight by not discussing things that happened in the past but that could happen in the future. The NF style of managing group discussion and interaction was focused on harmony, understanding and personal warmth. NF instructors/facilitators demonstrated a tendency to be creative, expressive and insightful. Understanding and communicating with people was their main concern. The NFs in this study were the type of professionals who attempted to make their respective institutions responsive to its people. Of the four groups discussed in this dissertation, NFs were the most enthusiastic and outgoing when conducting training or managing group discussions.

In conclusion, this investigation established the congruency of specific combinations of psychological preferences with behaviors and perspectives connected to designing, preparing and conducting training and managing group process. The analysis of the data revealed that individuals with similar combinations of perception and judgment (i.e., sensing-thinking – ST, sensing-feeling – SF, intuitive-thinking – NT, and intuitive feeling – NF) had the tendency to perceive and enact training activities in certain uniform ways.

Figure 1 depicts the congruency of the four functions combination (i.e., ST, SF, NT, NF) and the two themes that emerged from the data (i.e., designing and preparing instruction/facilitation and conducting training and managing group process).

Figure 1
THEME 1: DESIGNING AND PREPARING INSTRUCTION/FACILITATION
THEME 2: CONDUCTING TRAINING AND MANAGING GROUP PROCESS

SENSING-THINKING (ST) TRAINERS *Facts, details, reality-based, objective analysis, logic, step-by-step approach*	**SENSING-FEELING (SF) TRAINERS** *Facts, details, reality-based, subjective analysis, personal approach, people oriented, values*	**INTUITIVE-THINKING (NT) TRAINERS** *Interest in meanings & understanding, focus on possibilities, hunches, objective analysis, logic*	**INTUITIVE-FEELING (NF) TRAINERS** *Interest in meanings & understanding, focus on possibilities, subjective analysis, personal approach, people oriented, values*

How the Research Contributes to New Knowledge in HRD

The uses of the MBTI in the field of human resource development offer excellent prospects for personal development and career enhancement in training and development. Specifically, the professionals involved in the field can explore their psychological preferences and match their personality tendencies to the requirements of the training field. This self-awareness can result in the identification of potential strengths and weaknesses thus resulting in improved training performance.

This study focused on the specific role of instructor/ facilitator as it was fulfilled through a number of competencies and work outputs. Training professionals who conduct instruction/facilitation may use the knowledge of their type preferences with diverse applications such as:

1. developing and using multiple training strategies to meet the learning needs of trainees with particular psychological preferences and personality types;
2. designing curricula that are sensitive to the different ways employees perceive (i.e., sensing/intuition) and judge (i.e., thinking/feeling) their job duties and responsibilities;
3. understanding what motivates trainers with different psychological orientations when conducting learning activities (train-the-trainer context);
1. teaching other trainers how to facilitate and manage group discussion with an understanding of how instructors/ facilitators with different psychological preferences and personality types perceive and interpret thoughts, concepts, feeling and values (train-the-trainer context);
2. building coaching skills in trainers that would help them guide others (i.e., trainees) to recognize and understand personal needs, problems, alternatives, etc. in light of Jungian personality preferences (train-the-trainer context);
3. helping trainers work in teams that are psychologically diverse and therefore, rich in variety of perspectives;

Lastly, recommendations for future research using qualitative and/or quantitative approaches are encouraged. The following are some topics/areas that would add to the knowledge base of the HRD field and the MBTI-related research:

- Congruency of psychological preferences and any of the other HRD roles discussed by McLagan (1989);
- Training and development practices and the expression of the sixteen personality types in the different roles proposed by McLagan (1989);
- Management and communication styles of HRD managers/administrators and the four Jungian functions (i.e., perception and judgment).

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HRD Competencies and Roles for 2000: A Pilot Study of the Perceptions of HRD Practitioners

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This study examined the perceptions of HRD practitioners, all of whom were alumni of an HRD graduate program. The researchers asked the respondents to rank the extent to which 48 competencies and 15 roles were important. Competencies and roles included those in the McLagan 1989 study as well as HPI skills suggested by ASTD in 1996. Forty-one of the 48 competencies and 10 of the 15 roles were considered important by our respondents. In this paper, the researchers discuss some implications and recommendations derived from these findings.

Keywords: Competency Model, Professional Development, Future Trends

Recently, there has been a myriad of studies and articles noting the corporate paradigm shift emerging from globalization and new technology (McLagan, 1996; Rhinesmith, 1994; Robinson and Robinson, 1995). Kaeter (1995), after interviewing corporate training directors and HRD university faculty, suggested that the problem lay in differentiating between what the practitioner does and doesn't need to be able to do. Gill (1995) supported this conclusion by recommending that the HRD profession examine its "mental models if it is to re-invent itself and become instrumental in the new learning organization" (p. 26). If as many experts indicate, HRD practitioners still cling to an old paradigm that supports the belief that training departments are tangential to the organization's business function or that training is the sole responsibility of trainers (Gill, 1995), what part does the formal preparation of these professionals play in this dilemma? Are university graduate programs adequately preparing future HRD practitioners for the new performance-focused paradigm? Are today's university alumni prepared for tomorrow's learning organization?

Many HRD graduate programs base their curricula on the competencies and roles identified in McLagan's (1989) Models for HRD Practice. Some studies (Dare and Leach, 1998; Leach, 1993) have investigated the extent to which graduate programs actually utilize these competencies. These studies asked faculty from vocational and industrial education programs to determine the importance of 25 competencies and the extent to which they were adequately covered in the curricula. The findings of the more recent study (Dare and Leach, 1998) indicated that faculty considered all of the competencies to still be important to the training profession. However, the respondents believed that some of the "business competencies," defined as having a "strong management, economics, or administration base" (McLagan, 1989, p.56) should be given more attention and focus in the graduate curricula. These findings are not surprising considering the recent shift in interest from training to performance improvement and the integration of many HRD practices into the strategic and operational framework of the organization (Phillips and Pulliam, 1997).

In this study, we were interested not only in the extent to which the 1989 competencies, defined by McLagan (1989) as "knowledge and skills" (p.6) are still important, but also whether HRD roles identified in that study have changed as well. McLagan's (1989) study indicated that the fundamental HRD Roles, or "key outputs" (p. 6) were: administrator, evaluator, HRD manager, HRD materials developer, individual career development advisor, instructor or facilitator, marketer, needs analyst, organizational change agent, program designer, and researcher. Are HRD practitioners still assuming these roles or are they, instead, working in new roles with titles such as HPI evaluators or intervention specialists (Rothwell, 1996)? Or are they assuming the same roles and taking on the same tasks, while holding positions with new titles? Harrison (1997) points out that as a result of globalization and the technological revolution our language has changed considerably, leading, in turn, to changing perceptions of the processes and responsibilities involved in training. Is this new language sometimes being used to describe old roles and old behaviors?

To determine whether there are, in fact, new responsibilities and new skills which should be mastered by HRD practitioners, the investigators in this study asked alumni from a university HRD graduate program to (1)

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assess the extent to which the 1989 and 1996 competencies and roles are still important in their jobs and (2) identify any new competencies and roles which are an integral part of their professional lives today.

Review of the Literature

Innumerable articles in the past few years have addressed the dramatic changes in America's workplace and how these changes impact on the HRD profession. Marquardt and Engel (1993) identified 16 interpersonal and cultural competencies that HRD practitioners need to be effective in cross-cultural settings. Included among these are five attitudes: respect for other cultures, tolerance of ambiguity, commitment to HRD principles and practices, initiative, and a sense of humor. All of these, it could be argued, are valuable tools for HRD practitioners in all settings. In fact, the authors concluded this article by noting that "even among domestic HRD practitioners, many are ignorant about their own firms' or clients' corporate cultures -- their histories, rituals, structures, strategies, communication processes, and symbols" (p. 65). Mager (1996) supported these recommendations for additional global competencies by suggesting that the all trainers enhance their language skills and increase their understanding of other cultures. The 21st Century trainer, he noted, must be performance oriented, technically and socially skilled and self-employable and added that trainers who prepare themselves to be "performance professionals will be filled with far more exciting opportunities than those who limit themselves to the narrower world of training" (p. 54). One implication which could be drawn from articles such as these is that the competencies and roles identified in the 1989 study may not adequately reflect the knowledge, skills and attitudes necessary to be effective in cultures other than the U.S.

Some studies have investigated the impact of performance improvement on HRD competencies and skills. An ASTD survey (Bassi, Cheney & Van Buren, 1997) indicated that trainers will play a major part in the performance improvement process if they keep abreast of technology advances and new delivery approaches. McLagan (1996) updated her 1989 study's findings in an article in which she applauded the new trend toward the boundary-less organization, noting that it was more democratic, flexible and competitive. She also predicted the demise of traditional HRD Departments and training roles. Phillips and Pulliam (1997) reported that, among other changes, the HRD field must link training program delivery to organizational performance need. Other studies have investigated the impact of performance improvement on HRD competencies and skills. Writers such as Robinson and Robinson (1998) and Rothwell (1996) have identified new competencies and roles that HRD practitioners must master to be effective players in the new performance improvement revolution. These writers pointed to the need for all HRD practitioners to be accomplished consultants and possess the budgeting, contracting and entrepreneur skills required for a consultant.

Some doubt remains, however, about the extent to which the new competencies and roles identified by these writers require learning new skills and acquiring new knowledge bases. Dare and Leach (1997) argued that "even amidst a contemporary educational environment rampant with the search for standards of performance at all levels, *no clear model seems to have emerged to replace the competencies as they were defined in earlier studies*" [italics added] (p. 255). With no better model available, Dare and Leach decided to base their research on the findings of the 1989 McLagan study. In this study, we utilized a similar approach to that of the Dare and Leach (1998) study by asking HRD practitioners which of the 35 competencies and 10 roles listed in the 1989 McLagan study are still important to their profession today. In addition, we included 13 competencies and 4 roles identified by ASTD in 1996 as integral to the new human performance improvement process.

Research Questions

The purpose of this study was to determine the extent to which HRD practitioners who studied in a graduate program which utilized the competencies and roles identified in McLagan's 1989 study as the basis for its curricula are currently practicing these competencies and performing in these roles in their profession. Specifically, the researchers asked respondents the following research questions:

1. To what extent are these competencies perceived as important to HRD practitioners?
2. *To what extent are these roles perceived as important to HRD practitioners?*
3. Do HRD practitioners identify competencies other than these as important? If so what are they?
4. Do HRD practitioners identify roles other than these as important? If so what are they?

Research Procedures

Participants

Participants selected for this study were alumni of an HRD Master's degree program that used the 1989 Competencies and Roles as the framework for its curriculum. In October, 1998, a survey instrument was sent to 167 alumni from four regions of a southeastern state. This number reflected the entire population. Although a few of these were not working in the HR or HRD field, we felt that respondents not working in the field would eliminate themselves from participation in the study.

Instrumentation

The instrument, which was adapted from the Dare and Leach study (1998) asked participants to identify the extent to which they perceived a list of competencies and roles as important or not important. Competencies and roles identified in the 1989 study, as well as additional ones identified by the ASTD Models for Human Performance (1996), were combined rather than separated. The instrument was divided into three sections. In Section One, in the first column, the competency was identified and defined. The respondents were asked to indicate the extent to which they saw the competency as important. In Section Two, respondents were asked to use the same 4-point rating scale to evaluate HRD roles. Section Three added a qualitative dimension to the study by asking the respondents three open-ended questions. In this section, Question One asked respondents to list other competencies than those listed above they perceived as important and how prepared they felt to perform this competency. Question Two asked respondents for the same information regarding any additional roles they had assumed. Question Three asked respondents to list any competencies on this questionnaire which they found to be the same or overlapping, and why. Question Four asked respondents to list any roles on this questionnaire that they found to be the same or overlapping, and to explain their response.

Data Analysis

The researchers used a four-point Likert Scale, with (4) indicating "very important," (3) indicating "somewhat important," (2) as "not very important," or (1) as "of no importance." Competencies with a range of 3.0 to 4.0 were considered important. The significance level was set at .05.

Findings

Section I: Competencies

The findings of the Instrument are illustrated in Table 1. The means of the competencies ranged from 2.57 to 3.85, with 1 indicating of no importance, 2 as not very important, 3 as somewhat important, and 4 as very important.

The highest ranked competencies (with a mean of 3.85) were computer competence, interpersonal relationship skills, and industry awareness. Ranked in second place (with a mean of 3.83) were ability to see the "big picture" and feedback skills. The competency of leadership skills was ranked third (with a mean of 3.81). Adult-learning understanding and coping skills were ranked fourth (with a mean of 3.79). Ranked fifth was the competency of coaching skills (with a mean of 3.75). Sixth place was self-knowledge (with a mean of 3.74), while industry awareness, visioning skills, and relationship-building skills shared seventh place (with a mean of 3.7). Ranked in eighth place were competency-identification skills (mean of 3.68). Ninth place was shared by understanding functions of business and presentation skills (with a mean of 3.66). Organizational behavior (with a mean of 3.64) was ranked in tenth place. Our original premise was to consider a mean score of 3.0 as "important." This study indicated that 41 of the 48 competencies listed on the survey were considered important to HRD professionals.

Of the bottom five competencies ("systems thinking and understanding," "understanding power networks," "facilities skills," "contracting skills," and "model-building skills"), most were theoretical and conceptual in nature. We noted that "systems thinking and understanding" was rated with a 2.85, while "understanding the big picture" (having basically the same meaning) was rated with a 3.83. Perhaps the respondents related to "hands-on" terminology more than they did to the more abstract-sounding competencies.

Table 1
Importance of Competencies to HRD Practitioners

Competency	Importance of competency	
	Mean	Standard deviation
Computer competence	3.85	.36
Interpersonal relationship skills	3.85	.41
Industry awareness	3.85	.50
Ability to see the "big picture"	3.83	.38
Feedback skills	3.83	.47
Leadership skills	3.81	.44
Adult-learning understanding	3.79	.45
Coping skills	3.79	.57
Coaching skills	3.75	.48
Self-knowledge	3.74	.49
Industry awareness	3.70	.67
Visioning skills	3.70	.61
Relationship-building skills	3.70	.64
Competency-identification skills	3.68	.61
Understanding functions of business	3.66	.71
Presentation skills	3.66	.55
Organizational behavior	3.64	.65
Problem-solving skills	3.62	.53
Writing skill	3.58	.69
Cost-benefit-analysis skills	3.58	.53
Preparing clear objectives	3.54	.54
Group-process skills	3.51	.70
Intellectual versatility	3.49	.72
Electronic-systems skills	3.47	.61
Technological awareness and understanding	3.45	.57
Project management skills	3.45	.72
Negotiation skills	3.43	.67
Delegation skill	3.42	.66
Performance understanding	3.42	.60
Observing skills	3.38	.74
Training and development theories and techniques understanding	3.32	.83
Tracking and describing performance behaviors & effects	3.26	.68
Questioning skills	3.21	.60
Consulting skills	3.17	.78
Subject-matter understanding	3.17	.75
Knowledge of interventions	3.15	.74
Data-reduction skills	3.11	.67
Buy-in/advocacy skills	3.06	.93
Career-development theories & techniques	3.04	.71
Records management skills	3.02	.77
Research skills	3.00	.68
Information-search skills	2.94	.77
Understanding OD theories and techniques	2.92	.65
Systems thinking and understanding	2.85	.77
Understanding power networks	2.81	.76
Facilities skills	2.79	.82
Contracting skills	2.64	.88
Model-building skills	2.57	.77

Since this study was based on the study by Dare and Leach (1998), we wanted to compare our results with theirs (See Table 2). Their study dealt with vocational faculty's perceptions of the most relevant competencies, whereas our survey investigated perceptions of HRD graduates in the field: Their top five competencies ranged from 3.74 to 3.51, while our corresponding competencies ranged from 3.58 to 2.94. The biggest difference in means was in "information-search skills" (Dare & Leach mean was 3.51 – Hubschman & Powell mean was 2.94).
Though different audiences ranked the competencies, all three studies showed the largest increase in importance to be "computer competence," which was rated as 3.55 in 1991, 3.61 in 1997, and 3.85 in our study.

Table 2

Comparison of Importance of Top Five Competencies of Dare & Leach (1998) and Hubschman & Powell

Competency	1991 (D&L)	1998 (D&L)	1999 (H&P)
Writing skill	3.69	3.74	3.58
Presentation skill	3.76	3.65	3.66
Computer competence	3.55	3.61	3.85
Objectives preparation skill	3.75	3.53	3.54
Information-search skill	3.40	3.51	2.94

Section II. Roles

Table 3 shows the ranking of the importance of roles. Rankings ranged from a high of 3.60 (for "instructor or facilitator") to a low of 2.62 (for "researcher"). The top five roles (of 15 listed) were "instructor or facilitator" (mean of 3.6), "HRD manager" (mean of 3.57), "needs analyst" (mean of 3.43), "organization change agent" (mean of 3.42), and "change manager" (mean of 3.42).

The bottom five roles, which ranged in means from 2.83 to 2.62, were those of "administrator," "HRD materials developer," "individual career-development advisor," "marketer," and "researcher." We felt that these findings warrant more study. Discussions of these implications are in the Implications section.

Section III: Respondents' Comments

Section III of the Instrument asked respondents to identify any new or additional competencies and roles they perceived as important. Very few responded to these open-ended questions. Of the eleven responses, however, nearly all suggested some combination or integration of traditional HR/HRD competencies and roles.

These comments were reflective of much of the current literature. McLagan (1996, par. 42) noted that "organizations don't distinguish between HR and HRD. Or, at least they shouldn't." In support of respondents who suggested other competencies such as "policy development", "writing business plans," and "teaching corporate heads about HRD," McLagan added that the HRD profession should be engaging in more strategic planning and leveraging, with less focus on training interventions and practices. On the other hand, while the written comments suggested that the respondents of this survey were involved in higher-level networking roles and strategic planning, the majority of the respondents ranked many of the higher cognitive level competencies such as systems thinking, model-building, and understanding power networks quite low. In fact, they were ranked at the bottom of the list (See Table 1). As one possible interpretation of this contradiction, we suggest that those respondents who hold HR/HRD positions which involved executive-level planning and networking were more likely to offer comments on Section III, whereas the overwhelming majority of the respondents held much more traditional HR and/or HRD positions.

Table 3

Importance of Roles to HRD Practitioners

Role	Importance of role	
	Mean	Standard Deviation
Instructor or Facilitator	3.60	.74
HRD Manager	3.57	.80
Needs Analyst	3.43	.84
Organization Change Agent	3.42	.72
Change Manager	3.28	.72
Evaluator	3.25	.76
Program Director	3.19	.79
Evaluator	3.09	.99
Intervention Specialist	3.04	.99
Analyst	3.02	.91
Administrator	2.83	.87
HRD Materials Developer	2.74	.88
Individual Career-development Advisor	2.72	.93
Marketer	2.68	.83
Researcher	2.62	.84

Table 4

Additional/Other Competencies -- Respondents' Comments

Knowledge of:
More HR -- benefits, etc.
Legalities within HRD/HRM: Issues around diversity, etc.
Governmental regulations and how they apply in the workplace
Recruitment and selection
Benefits and Compensation -- especially with veterans and their families
Writing business plans
Policy development...e.g. benefits, conflict resolution
Integrity and ethics issues
Community leadership...i.e. liaison with volunteer programs
CBT Training design
Managing/teaching corporate Vice-Presidents about HRD
Communications skills for managing continuous change and re-organization

Table 5

Additional/Other Roles -- Respondents' Comments

HR Auditor
HRM Program Analyst
De-Stress Agent
Learning Specialist
Media Specialist
Training Coordinator

As with the competencies, respondents identified new or additional roles that appeared to blur or combine traditional HR/HRD roles. The first four listed in Table 4 suggest roles that might include training and developmental tasks but also seem to integrate more traditional HR responsibilities with those of finance and budgeting. The role of "de-stress agent" highlights the degree of stress and tension experienced by many HR/HRD practitioners. It also suggests that some may be expected to "fix" this problem. Apparently, the traditional HRD role of change agent, regardless of what the role or competency is entitled, is still an important one for many of our respondents.

One of the trends consistently reported in the literature is that of consultant. As cited in the Review of Literature section, many writers have pointed to the need for 21st century practitioners to acquire or update their consulting skills. However, the role of consultant, as well as competencies such as contracting, understanding OD, records management, buy-in advocacy, research, and consulting skills, was not perceived as important to the majority of these respondents. In addition, the roles of researcher, marketer, and career development advisor (a role the literature suggests is often outsourced to consulting firms) were ranked low. Apparently, those who chose to participate in this study did not hold internal or external consulting positions, nor did they perform consulting skills in their daily worklives. However, since these respondents lived and worked in a relatively small geographical area, and reflected a very small proportion of the national HR/HRD population, it was impossible to determine whether our findings suggested a real gap between a reported trend and the actual worklife of many practitioners. Additional roles suggested by respondents such as "learning specialist," "media specialist," and "training coordinator" were more accurately supported by the current literature. McLagan (1996, par. 59) noted that the "instructor/facilitator" role is increasingly difficult to assume. "In it, we present information, lead structured learning experiences and facilitate group discussion and group processes sometimes on computers and other virtual environments." Such an expanded description of the traditional HRD role appears to explain the "new" roles expressed by our respondents.

Implications and Recommendations

The findings of this study generally support the Dare and Leach (1998) study. Our respondents indicated that nearly all of the competencies and roles identified in the 1989 McLagan study were important. Of special interest to us were the few competencies and roles not ranked as important. In addition to those competencies and roles that reflect the consulting practice, many were couched in abstract or theoretical language such as model building and systems thinking. Clearly, our respondents live in the real world. We cannot hypothesize that these specific practitioners do not actually use the knowledge and skills implicit in this concepts or models; however, it appears that they do not have regular conversations that address these terms. In other words, they may engage in systems thinking and model building; however, they don't label their tasks as such. Our respondents seem to be a fairly concrete, action-oriented group of doers.

We concur with Dare and Leach (1998) who recommended that university programs continuously assess the appropriateness of academic preparation. However, in addition to the educational personnel who should be part of the creative process of curriculum building and revision, we strongly recommend that HRD practitioners, especially those who are graduates of HRD university programs, be an active part of this curriculum process. Our findings indicate that, although many of the competencies and roles identified by McLagan were a viable part of the HRD professional's work lives, there may be areas of their jobs that were not being addressed, either by the traditional model or by some of the newer ones. More recently defined roles such as HPI evaluator and change manager appear to be accepted by our respondents as an important part of today's HR/HRD profession. However, they ranked other roles and competencies, which were and continue to be thought of by experts as highly important, quite low. For example, do most practitioners actually perform research activities? Or is research delegated to the marketing department or the finance office? Do HR/HRD practitioners engage in career development activities anymore? Is all of this very valuable service outsourced? Or do HR/HRD practitioners assist employees in planning their careers under the guise of another role? Finally, who coordinates the scheduling of formal training activities? Who handles facility-planning? According to our respondents, this is not an HR/HRD activity any more. Is it now a clerical responsibility? And if so, what does this imply about the amount of importance placed on formal training by organization executives? Does this mean that more emphasis is placed on informal learning, as the learning organization research suggests? Or, instead, does this mean that little emphasis is placed on learning at all?

Other questions we have relate to the roles our respondents ranked as of low or no importance, which were administrator, media specialist, materials developer, career-development advisors, marketer, and researcher. For example, have administrative assignments been taken away from the HRD professional, or are there other variables which may have affected these results? Since the HRD materials developer role was ranked so low, can we imply that media specialists and instructional designers are assuming this role? Since HRD professionals do not seem to be working as individual career-development advisors, who is now assuming this role? Has it disappeared as a result of downsizing? If the HRD professional does not consider himself or herself a marketer or researcher, who is assuming these roles?

The level of ambiguity reflected here strongly points to the need for HR/HRD practitioners, representing a wide variety of geographical areas and organization types to be a part of any new competency models that are developed.

Future studies should focus on the following areas:

1. A close examination and review of all of the articles and empirical and theoretical studies which have emerged during the past few years, searching for, in particular, overlapping themes and contradictions.
2. A new model that would specifically determine the extent to which Human Resource and Human Resource Development overlap and are distinct from each other, as it is reflected in current practice. A model similar to McLagan's (1989) Human Resource Wheel, would provide a significant contribution to the field

Limitations of the Study

Because of the small sample size, and the fact that the respondents were all from the same southeastern state, results of this study were not generalizable to a larger or different population.

1. The instrument being used in this pilot study was developed by the researchers, and was previously untested. The researchers view this study as a preliminary attempt to establish validity and reliability.

2. Demographics should be included in the next version of the instrument. Specifically, the researchers need to know job titles, tasks, and responsibilities of the respondents.

Contribution to the Field

We feel that the findings, implications, and recommendations of this study should provide some insight into the extent to which published competencies and roles in the HRD field reflect current practice. The ambiguity reflected in these findings suggests that there may be some confusion in language and terminology being used to identify job titles and skills. Perhaps future competency models should emphasize the extent to which there are shared meanings among HRD professionals.

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Ethical Aspects of Human Resource Development

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Several issues of ethical concern exist within the general field of organizational HRD policy and practice, especially around value and culture change. Ethical frameworks that include virtue ethics and ethics of care are relevant to an analysis of HRD professional practice, and in particular, relations with commercial clients, choice of intervention, and management of individual participant psychological safety. Exploratory research was conducted with a small sample of UK providers of HRD interventions focusing upon value and behavior change.

Keywords: Ethics, HRD, Value Change

Human Resource Development (HRD) is the area of organizational human resource policy and practice that is least likely to receive ethical scrutiny. Recruitment, selection and assessment, performance and reward management, and employee relations procedure are more readily held to account against ethical principles (Winstanley and Woodall, forthcoming 1999). Learning, training and development interventions are invariably presented as intrinsically good activities, and so it is often assumed that 'learning' is a virtuous activity, and that organizations pursuing interventions designed to enhance learning must be well-intentioned towards their employees. Indeed, the dominant theories that inform most organizational training and development practice, such as humanistic adult learning theory (Rogers, 1969; Knowles, 1989), cognitive learning styles (Kolb and Fry, 1975), and field theory (Lewin, 1952) all adopted a positive ethical position towards adult learning, embodied in strong respect for individual learner rights to autonomy, dignity, self-esteem and privacy, underpinned by the upholding of high standards of professional integrity on the part of trainers and facilitators (Woodall and Winstanley, 1998) . There is an undeniably strong respect for ethical humanism implicit in the learning process

However, there are several issues of ethical concern within the general field of organizational HRD policy and practice, especially around value and culture change. The tradition of ethical humanism can be undermined by developmental interventions designed to change culture and personal values (McKendall, 1993; Woodall, 1996), and the current strategically focused agenda of HRD activity can run into a number of ethical risks. There are the dangers of manipulating individuals into acceptance of the need for commitment by displaying certain behavioral competencies and into espousing certain values at the same time as they are forced into acceptance of increased uncertainty and insecurity in the employment relationship.

This is not say that ethical reflection has not or does not take place among HRD professionals, but rather that this is spasmodic and half-hearted in nature, rather than constant and intentional. There was some discussion in the USA in the early 1980s about ethical standards for the organization development profession (White and Whooten, 1983; Walter 1984) as many practitioners were concerned at a tendency to disregard freedom, privacy, and self-esteem in the process of focusing upon task accomplishment and organizational objectives. Minimum ethical standards were proposed, including:

- interventions must be selected that have a high probability of being helpful in a particular situation;
- the consultant should not use interventions that exceed his or her expertise;
- the 'client system' should be kept as informed as is practicable about the nature of the process;
- the consultant must not be working on any personal, hidden agendas that might obtrude into high quality service for the client;
- commitments to confidentiality must be kept;
- individuals must not be coerced into divulging information about themselves or others (French and Bell, 1990:219-233)

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The Research Problem and Ethical Frameworks for HRD

More recently there has been some recognition within the AHRD of the need for attention to professional ethics (Marsick, 1997) but this reflects some uncertainty about how to proceed. Do the ethical issues rest entirely in matters of intervention process, or do they also lie in the selected intervention techniques themselves? Above all, how ethically aware are HRD practitioners? This paper explores these issues within the context of a selection of UK practitioners of HRD interventions used to promote value and behavior change.

It is difficult to display ethical literacy and avoid philosophical obscurity. However, we should remind ourselves of what ethics is about. It is the study of moral awareness, judgment, character and conduct in order to clarify the moral perspective in policies and practices. It serves '..to help disprove some suggestions and throw up some confusions' (Raphael, 1994). It is not about arriving at absolute final standards of what is right and wrong. In practice, consideration of ethics might lead us to adopt an ethical framework that informs our personal, organizational, and professional standards of conduct. However, in doing so we should be aware of the strengths and limitations of the ethical framework we adopt.

In an area of professional policy and practice like HRD, the ethical principles that are most commonly adopted are either an attempt to uphold and balance individual rights against those of organizations (ultimately to be derived from the so-called 'Kantian' or deontological perspective - see Table I) or else an attempt to justify the effect of policies and practices upon individuals in terms of the consequences for the wider organization (the 'Utilitarian' or teleological/consequentialist position). However, there are in fact a range of other ethical frameworks as outlined in Table I below.

A quick consideration of the above would indicate that virtue ethics (Solomon, 1993; Collier, 1995) and the ethics of care (Gilligan, 1982; Carse 1996) also provide relevant ethical frameworks for considering HRD policy and practice. Virtue ethics suggests that HRD professionals are obliged to 'lead a good or exemplary life' in their work, and to this end implies that professionals should identify, publicize and constantly uphold the key virtues for HRD, and that adherence to these virtues is not contingent upon organizational context and circumstances. These virtues might include integrity, transparency, and respect for persons, but there are possibly many others. So integrity would involve being explicit about the purpose of a particular development program - including any hidden agenda; transparency would involve being clear about the 'what-how-and-why' of an intervention; and respect for persons would involve being mindful of confidentiality in relation to program participants, and the boundaries between the public and private, between the cognitive and the emotional, and the need for 'permission' to be obtained without duress, if these boundaries are to be crossed.

By contrast, the ethics of care take us away from impartiality and formal abstraction in our ethical reasoning. The care orientation:

> rejects impartiality as an essential mark of the moral, understands moral judgments as situation-attuned perceptions to others' needs and to the dynamics of particular relationships, construes moral reasoning to involve empathy and concern, and emphasizes norms of responsiveness and responsibility in our relationships with others (Carse, 1996).

In contrast to the Kantian and consequentialist approaches to ethics which suggest that moral prescriptions be justified from an impartial standpoint, the ethics of care suggest that sound moral judgment may be dependent upon being attuned to specific individual needs, and the idiosyncrasy of circumstances, and that morally relevant features of particular situations can sometimes be obscured through an overzealous reliance on impartial prescriptions. However, unlike virtue ethics, the ethics of care finds upholding principles to be of limited use in informing and guiding a caring moral response. So, for example, ensuring that all employees experienced the same (possibly personally intrusive) team building program is not an ethical justification if one or more individuals find this to be a distressing experience. In this model, it would be ethical to withdraw such individuals from the program to show empathy and compassion for their distress, and to treat this as a consideration of equal or even more significant weight than overall outcomes, in the evaluation of the program. Thus the extent to which HRD professionals overtly promote and exemplify virtues in their relations with commercial clients, and the extent to which they also display an awareness and management issues around individual participant psychological safety, are also important considerations for ethical HRD.

Table I

A Summary of Ethical Frameworks

Theoretical Base	Type	Perspective	Brief Description
Kantian Theory	a) Universality and Reversibility	Rule based	One must abide by the categorical imperative such that what is right for one person is right for everyone, and do unto others as you would be done by.
	b) Respect for persons	Rule based	Second formulation of the categorical imperative: people should be treated as ends in themselves, never as means to ends.
Utilitarian Theory	a) Act Utilitarianism	Act based	Assess the act that will be for the greater good (or utility) as being ethical - the ends of the act justify the means. The aim is to achieve the greatest good for the greatest number
	b) Rule Utilitarianism	Act/rule based	Focus on the utility of a rule rather than the act: rules are fashioned on utility, and conduct on rules. Assess the tendency for an act to improve happiness or utility if acts of this type are generally done rather than not done.
Social Contract Theory		Contract based	Societal or contractual agreements must be abided by to ensure justice and the rights of individuals prevail
Discourse Ethics		Communication based	Assess the process by which decisions are arrived at. An ethical discourse is open, honest, suspends power differentials and includes all relevant points of view
Virtue Ethics		Character based	Assess a person's character such that a good, virtuous person exhibits virtues such as honesty, kindness, and generosity. Intentions are as important as actions.
Ethics of Care		Situationally attuned	Assess the situation in a manner that shows empathy and responsiveness to all aspects of individual's circumstances

Adapted from: L. Spence (forthcoming, 1999) What ethics in the employment interview? in D. Winstanley and J. Woodall (eds.) *Ethical Issues in Contemporary Human Resource Management.* Basingstoke: Macmillan.

Thus it should be apparent that HRD professionals have many ethical frameworks at their disposal which can all lead to a different interpretation of what is moral HRD practice. This presents a dilemma: either a moral relativism of 'anything goes', or else drawing up codes of professional practice, or at the very least raising professional debate and awareness. It is doubtful whether an open admission of moral relativism would be professionally acceptable, and as Marsick (1997) has pointed out, the familiar recourse to codes of professional conduct is of dubious worth, as codes are best when dealing with normal practice and can come unstuck when practitioners face a dilemma. Recent research on the use of a professional code of practice for psychological testing

within the UK revealed how codes of practice confine themselves to prescriptive statements, avoiding guidance on how the balance between competing claims might be achieved, and are not backed up with monitoring of compliance (Baker and Cooper, forthcoming, 1999). In this case there was a fair degree of correspondence between test users' espoused values about candidate rights, and their reported good practice. However, it was also apparent that in a number of important areas there was a contradiction between the reported practice of test users and their declared values about testing and individual rights. The main underlying reasons for this are pragmatics, self interests and costs. So, codes of practice can end up as a life raft to which organizations and professionals may cling without necessarily carrying out any ethical scrutiny. May be a better starting point is to promote the ethical awareness of HRD practitioners? This involves starting by exploring their awareness of the ethical issues surrounding not only the style in which an intervention is delivered but also the substance of the intervention itself.

Methodology

Previous research into the ethical awareness of managers (Snell, 1993; Maclagan, 1998) draws upon either models of ethical development (Kohlberg, 1969) or discourse, but as these are ethical frameworks which rely upon impartial and formalistic abstractions, and do not address the issues emerging from virtue ethics and the ethics of care, they have been rejected here. In addition, the inevitable sensitivity surrounding any investigation into ethical awareness has to be taken into account when considering valid and reliable methods of data collection. A questionnaire survey needs careful construction to include items that are valid indicators, and careful administration to ensure that it is appropriately completed. Thus the resulting research design for this project, was exploratory and interpretive, relying on documentary evidence and semi-structured interviews with three HRD professionals in each of three areas of specialist HRD practice within the UK. These were outdoor management development (OMD), Neuro Linguistic Programming (NLP) and Gestalt in organisations (GiO). These were selected because they are presented as useful to organizations undergoing significant change, and in particular, they assist with individual attitude and behavior change. More specifically, OMD has aroused considerable controversy in the UK around general health and safety and the placing of individuals in unfamiliar and stressful situations; NLP has acquired a reputation for rapidly achieving results with influencing skills, but again with some controversy surrounding methods; and GiO has a reputation for achieving effective value change and practitioner integrity, despite not being extensively use within the UK.

The sample of respondents was drawn from exhibitors at the March 1998 HRD Week (the major national annual exhibition and conference in the UK sponsored by the Institute of Personnel and Development). Both researchers attended this exhibition and made initial contact with several exhibitors providing OMD and NLP, and collected their promotional literature. In addition, one of the researchers was a practitioner of GiO, and made contact with two additional providers. These initial contacts were followed up by letters requesting interviews and outlining the main research questions. In view of the sensitivity involved in revealing an interest in ethical awareness, the researchers introduced the principal research question as concerned with the values underlying different approaches to personal development, and the approach adopted by the respondents. The identitiy of the researchers and their interests in ethical HRD were also revealed.These introductory letters were followed up by telephone to request an interview. The interview schedule contained eleven questions around the following themes:

- the ethical basis of forming and maintaining contractual relations with commercial client;
- the espoused values of the respondents
- the range of psychological change tools used
- awareness and management of issues around psychological safety and professional integrity

All respondents practicing OMD and GiO interventions were very enthusiastic about being interviewed on this topic. The three OMD respondents were all not-for-profit organizations who were members of the Development Training Advisory Group (DTAG), a trade association for OMD with a code of conduct and statement of principles. The GiO respondents included the two major providers of training in the UK, and a small consultancy in which one of the authors of this article was a partner. It proved much more difficult to secure respondents in NLP. Despite contacting several providers at HRD Week, and through the membership list of the UK Association for NLP, only two agreed to a face-to-face interview. They were both sole practitioners, but with very different backgrounds (humanistic psychology and information management) and different clientele (in the first case working with individuals experiencing personal and work-relationship difficulties, and in the other, delivering open programs in NLP training plus executive coaching). Some of the other NLP providers who were approached expressed lack of

interest and others voiced suspicions about the researchers' motivation. It is possible that contextual issues could explain the differing levels of enthusiasm. In the case of OMD, all three respondents admitted that they perceived the interviews as offering an opportunity to redress what they perceived as sensationalized media misrepresentation of the 'danger' and 'pressure' on individual OMD program participants. The GiO respondents saw this as an opportunity to publicize an intervention that is not well-known among HRD professionals. Finally, litigation over the proposed trademarking of NLP by its US founders was in progress in the UK at the time when interviews were taking place. This may quite understandably explain the reluctance to participate. None of the interviews were taped, but notes taken during the interview were written up later and scrutinized by both researchers to identify the key themes emerging around each of the interview questions.

Results

Ethics and contractual relations with commercial clients

All three OMD providers were concerned about client probity and openness, and although they admitted that they seldom turned down work with a client, their process of contracting would screen out undesirable clients, or would bring to the surface unethical intentions. In all three cases, learning contracts based upon strong diagnosis and regular monitoring and evaluation provided the opportunity to identify problems with the client when they arose. The positions of the two NLP practitioners were very different. One was very aware of the issues about client probity and openness, and was explicit in their refusal to collude with any hidden agendas. The other was bemused with questioning around this issue. The notion that there were clients with whom they could not work, or that there could be problems was reframed as a construct of the interviewer's mental processing!

All the GiO respondents were very firm about their conditions of working with clients. They would only work with commercial clients with whom an open, honest relationship was possible. Hidden agendas were unacceptable, and the iterative manner of arriving at a contract with clients would work to bring these issues to the surface, and if necessary could result in the provider withdrawing from the contract. Commercial clients who could not accept this way of working would not be acceptable.

Espoused values

Although only one had an explicit values statement, all three OMD providers referred to the statement of principles issued by their trade association, and in particular:

> (upholding)...political and religious tolerance, mutual respect, a belief in the dignity and importance of every person irrespective of status, age, sex, origin or preconceived contribution to society; a belief in every individual's capability to learn and to go on learning; respect and care for the environment (DTAG, 1991).

This was echoed in the interviews, with phrases such as 'respect for the uniqueness, dignity and potential of each individual', an aim to establish 'mutual trust...(involving...both sides being open, honest, truthful and reliable'; the provider's acceptance of 'full responsibility for physical and emotional safety', and 'professionalism in terms of skills, experience and knowledge.

One NLP practitioner provided literature with clear values statements, and conceded that their prior training in humanistic psychology, and their membership of the main professional body for counseling, required adherence to a professional code of practice. This respondent was also a member of the UK Association for NLP Psychology and Counseling (a primate limited company, rather than not for profit organization) whose members subscribed to a code of professional ethics that was very similar to those adopted for psychotherapy and counseling. In contrast, the other NLP practitioner was a member of the Association of NLP which has not provided a statement of principles or code of professional practice, and this provider did not have a statement of values. When pressed about their values, the hesitant answer was 'respect for individuals...love..and, oh....fun!'

GiO practitioners are all required to be professionally trained in Gestalt therapy and so are well aware of the codes of professional ethics of their professional body (the Gestalt Association UK), and so did not see the need for any additional written codes of practice or value statements. They were very explicit and eloquent about their values. These included: integrity, self-awareness, honesty, compassion, humanity, choice, responsibility and spirituality. Ethical values were '..the invisible glue that binds like-minded people together'.

Range of psychological change tools used

OMD programs usually use a combination of outdoor instruction and indoor facilitation and guided reflection. All instructors and facilitators were appropriately professionally trained (in one provider occupational psychologists were employed) and professional development activities were provided. All instructors were trained in basic learning styles, group dynamics and management of the 'comfort-stress-challenge triangle'. 'Indoor' facilitators had often taken short courses in other interventions such as Transactional Analysis and even NLP which was generally found to be interesting, although not consciously practiced.

Although one NLP practitioner conceded that they relied on their extensive repertoire of humanistic psychology tools as well as NLP, the other cited a more restricted and eclectic range of interventions including....

Psychological change is at the core of gestalt, but there are no explicit 'tools' in an instrumental sense. It is based upon a paradoxical theory of change, namely that individuals cannot be other than it is in their nature to be, and that attempts to change them otherwise are doomed to failure. So, as attempts to get behavioral and attitude change by just working with individuals at a cognitive level, are perceived as doomed to failure. Hence GiO practitioners assist individuals with the development of their self-support mechanisms in a manner that helps them acknowledge the existence and role of others (often those who hold very different values) and to seek their support. This requires establishing dialogue and supporting self esteem in oneself and others. So the Gestalt approach is not a set of techniques and formulae, so much as an orientation towards experience that is dynamic and flexible.

Awareness and management of issues around psychological safety and professional integrity

There was an explicit commitment to the psychological safety of program participants in the OMD trade association guidelines on health and safety with respect to the identification, handling, and prevention of mental and emotional disturbance at all stages of trainee selection, and course design, preparation and delivery. There was also an acknowledgment that 'evangelical', aggressive, confrontational high energizing leadership styles in trainers were unacceptable and likely to cause injury. All three providers of OMD had a very clear view of what psychological safety involved: openness and transparency in dealing with program participants; maintaining confidentiality about individual participant progress; and ensuring that peer pressure on individuals to go beyond their 'comfort zones' is directly confronted; while endeavoring to maintain a balance between challenge, support and respect for individuals.

Again there were marked differences in this respect between the two NLP respondents. A very conscious concern with boundaries between professional and individual client, an awareness of the limits of their professional expertise, and an acknowledgment of the presence of transference-counter-transference processes in client relations could be contrasted in one case with an instrumental naiveté around values, emotions, and relationships with clients: 'NLP is a means to an end - ultimately it is about what works.

GiO practitioners take psychological safety very seriously, and this is built in from the start, through managing the boundary between organizational and historic family issues, through awareness of and sensitivity to the needs and fears of others, and through flexibility in adjusting material to respond to personal and organizational issues. They aim to avoid pursuing their interventions beyond individual participant capacity to tolerate anxiety, and if necessary, will take time out from different parts of the program to support vulnerable people.

Discussion, conclusion, and future implications for HRD

As the research reported in this paper has adopted an exploratory and interpretative research design, the aim was not to make generalisable statements well rooted in claims to validity and reliability. Rather, it sought to explore the ethical dimension of HRD interventions; the ethical awareness of HRD practitioners specializing in work on value and behavior change; and the extent to which this was embedded in approaches to client contracting and the management of individual participant psychological safety. There are a number of interesting points for further professional discussion and research.

First, while most practitioners of OMD and GiO were eager to discuss issues of values (ethics), there was a marked diffidence on the part of NLP practitioners. This discrepancy is further reflected in the degree to which respondents were ethically literate and comfortable with a discussion of ethical values. Difficulties of access to respondents indicate that this issue should receive further exploration.

Second, the popularity of techniques with commercial clients bears no relation to the ethical practice of an intervention. So, for example, OMD has a poor ethical image in the UK, but can in fact be conducted in a very self-

consciously ethical manner, and little known methods such as GiO can offer a very high degree of ethical sophistication on the part of practitioners. There is a potential policy implication for the HRD profession, over whether it should promote interventions which are conducted in a self-consciously ethical manner, and caution against those HRD interventions of dubious ethical quality.

Thirdly, while codes of practice can provide a useful means of communicating ethical standards of intervention (as in the case of OMD) to both HRD professionals and their commercial clients, this is not always necessary, if practitioners of an intervention have undergone accredited training in humanistic psychology or personal counseling which has built in processes for dealing with ethical issues around contracting with commercial clients and protecting individual psychological safety. A mechanical adherence to 'good practice' is not enough.

Finally, this paper suggests the need to develop an ethical framework for HRD that goes beyond a list of individual program participant rights, or the ethical justification of an intervention in terms of its business benefits. Virtue ethics and the ethics of care are also relevant and should be incorporated in further research into the place of ethics within HRD.

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Emotion Management and Organizational Functions: A Study of Action in a Not-For-Profit Organization

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This case study of a not-for-profit organization uses Hochschild's (1983) emotion systems theory and Parsons' (1951) social systems theory to look at the purposes for which members of an organization managed their experience and/or expression of emotion (i.e., performed emotion work). The study found that emotion work actions were attributed to all four system functions of Parsons' (1951) theory. The dominant form of emotion work was anger suppression; the majority of emotion work actions were associated with the organizational culture. Because much of the emotion work was performed by individuals for organizational purposes, it may be possible to use emotion work actions by individuals to take a "distributed view" (Glynn, 1996) of organizational level phenomena.

Keywords: Nonprofit Organizations, Emotion Work, Social Systems

Emotion has been a component of many social science theories since the 19th century. In the organizational context, the study of emotion has focused on such elements as job satisfaction and employee stress. However, a growing interest has surfaced regarding a relatively new sub-field of sociology developed by Hochschild (1979, 1983)—the sociology of emotion (e.g., Ashforth & Humphrey, 1995; Fineman, 1993; Rafaeli & Sutton, 1987; Wharton & Erickson, 1993). The sociology of emotion, also known as emotion systems theory, is more concerned with the macro-construction of emotion and the emotional interchange between organization and employee than with specific attributes or outcomes of emotion at the individual level. A key component of the theory focuses on the conscious management of the experience and/or expression of emotion, known as emotion work.

Neither field researchers nor theoreticians have included in-depth explorations of the links between emotion work and the organization. The focus in both field research and theory extension is at the micro-sociology level without generally considering the macro-level. The macro-theory level may provide a lens to view emotion work as it relates to the organizational context. This study explores the links between emotion work and an existing macro-theory encompassing both the individual and collective levels of a social system. Specifically, it demonstrates that Parsons' General Theory of Action (Parsons, 1951) may be used as a meta-framework for a more rigorous approach to viewing emotion work in organizational contexts.

Problem Statement

Studies on emotion work have successfully sought to verify the existence of the phenomenon in a variety of organizational settings (e.g., Hochschild, 1983; Pogrebin & Poole, 1991; Wharton, 1993). These studies were conducted in organizations known for requiring a great deal of control of emotional states by employees (e.g., Hochschild, 1983; Pogrebin & Poole, 1991; Rafaeli & Sutton, 1987, 1989). Interestingly, these employees, such as airline attendants, bill collectors, and police officers, are all required to interface with customers to a large extent. Emotion work has been found to exist in all such occupations. Ashforth and Humphrey (1995) call for the study of emotion work in more typical organizations. Because the research site for this study is a not-for-profit organization, it is distinct from other organizations in which emotion work was studied. Further, the daily staff operations constitute a more "typical" organization. Including both paid and unpaid organizational members, this study captures emotion work in a fundamentally different population than previously studied.

Early studies in the cost of role conflict, which may include emotional roles, revealed an increase in job tension and a decrease in both job satisfaction and confidence in the organization (Cox, 1978). More current physiological studies on emotion suppression indicate that emotion work may have negative physiological consequences—such as impaired immune system functioning and artherosclerosis—which could influence organizational level phenomena (Levenson, 1994). Unfortunately, no attempt has been made to empirically assess the emotion work engaged in by employees as it relates to any organizational level phenomena. Further, no model exists to enable such research. This study links emotion systems theory to a theory of action that will facilitate the study of the relationship between emotion work and organizational phenomena. Such studies may help practitioners

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improve individual and organizational performance by identifying and addressing organizational issues around which emotional suppression is high.

Glynn (1996) points out that "extending a microlevel construct to the macrolevel organization invites opportunities for ambiguity and threats of anthropomorphism" (p. 1087). However, if the goals of emotion work are oriented to both the individual and the organization, it is possible that emotion work is both a micro- and a meso-phenomenon. Individual emotion work may hold the seeds of the collective that can form a bridge between the individual and the collective. It may be a construct which enables a "distributed" (Glynn, 1996) view of the organization. In other words, organizational goals are embedded in the organizational members such that a study of individuals can yield patterns of the collective. This study offers a way to use an individual level phenomenon in order to begin to understand organizational level phenomena.

In summary, research to date has not attempted to "trac[e] a set of links" (Fineman, 1993, p. xii) between emotion work and any type of organization, whether emotion-laden or more "mundane." Nor has any empirical research been conducted to build or extend theory to accomplish such an agenda. This study extends theory in order to trace the links between emotion work and organizational phenomena in future studies by establishing a connection between the emotion work construct and the individual level of Parsons' (1951) analytical systems model. Hochschild (1979, 1983) argued that emotion work is generally conducted for organizational purposes at the behest of organizational management. However, it is also possible that emotion work is conducted for individual purposes, especially in those organizations that do not have a high customer interface. Further, it is possible that emotion work may be conducted for organizational purposes out of a personal sense of commitment to the organization rather than at the behest of organizational management. Thus, the research question that guided this study was, "*Do individuals conduct emotion work for individual or organizational goals within an organization?*"

Overview of Conceptual Framework

Talcott Parsons' model of four "functional imperatives" was used as the organizing framework for the goals of emotion work in this study. These four functional imperatives are associated with the goals of action taken by a system (Wallace & Wolf, 1995). They are called adaptation, goal attainment, integration, and latent pattern maintenance. Although most people associate Parsonian theory strictly with groups or larger levels of systems, Parsons (1961) argued that individuals could be considered systems that encompassed the four functions. Therefore, Parsons' classification system may be useful in understanding the goals of action taken by an individual within a social system. Figure 1 is a representation of the four system characteristics.

Adaptation	Goal
Latent Pattern Maintenance	Integration

Figure 1: Parsons' four system functions

Briefly, according to Parsons (1951, 1961), the adaptation function obtains resources from the external environment for use by the system. The goal attainment function is concerned with mobilizing those resources to meet the larger goals of the total system. The integration function is concerned with the ways to bring together the various units and resources of the system in order to create a collective identity. Finally, the latent pattern maintenance function serves to maintain the stability of institutionalized beliefs and patterns of interaction within the system. Again, these functions relate to the goals of actions taken by a social system.

Hochschild called her contribution "emotion systems theory" because it is comprised of "a system composed of individual acts of 'emotion work', social 'feeling rules', and a great variety of exchanges between people in private and public life" (1983, p. ix-x). Many consider her to be the founder of a relatively new sub-field within sociology known as the "sociology of emotion" (Wallace & Wolf, 1995). As such, the phrase "sociology of

emotion" has often replaced Hochschild's own term of "emotion systems theory". The theory has two primary components—emotion work and feeling rules.

Emotion work is the active attempt to change, in either quality or degree, an emotion held by an individual (Hochschild, 1983). There are two general types of emotion work (Hochschild, 1979). The first is "evocation." When an individual performs the evocation type of emotion work, that individual is trying to draw forth an emotion that is not present. The other type of emotion work is called "suppression." It is just the opposite of evocation. When an individual is performing the suppression type of emotion work, that individual is trying to eliminate or, at the very least, subdue an emotion that is present.

The second major component of Hochschild's work is that of "feeling rules" (Hochschild, 1979, 1983). Feeling rules are the "socially shared, albeit often latent (not thought about unless probed at)" (Hochschild, 1979, p. 563) guidelines that govern how we want to try to feel. They guide our expression of emotion and they guide our attempt to internalize the acceptable emotion (as defined by the situational rule). Feeling rules represent what an individual "should" feel in a given situation. These rules can govern the extent of the appropriate feeling—how much emotion should be displayed/felt; they can govern the direction of the emotion—whether the individual should feel happy or sad; and they can govern the duration of the emotion—how long an individual should maintain a particular emotion. As such, they are "guidelines for the assessment of fits and misfits between feeling and situation" (Hochschild, 1979, p. 566).

Emotion work theoretically constitutes a critical element found in the Parsonian General Theory of Action. Parsons argued that four types of action were possible—expressive, intellectual, moral, and instrumental (Ritzer, 1992). Expressive action is primarily affective; intellectual action is primarily cognitive; moral action is primarily evaluative; and instrumental action is a complex act in which affects are cognitively manipulated in order to achieve goals. Hochschild (1979; 1983) looks at how society forces an individual to cognitively shape and control feelings in order to fit within that society, in order to achieve goals within that society. Thus, emotion work can be considered a type of instrumental action.

The four functions described earlier (adaptation, goal attainment, integration, and latent pattern maintenance) represent the goals of instrumental action at the individual and collective levels of a system. Because instrumental action is goal oriented, when conducted by individuals it should manifest itself in individual goals associated with the four system functions. It is possible, however, that emotion work also constitutes a meso-phenomenon. In other words, emotion work conducted by an individual may be characterized by both individual *and* organizational goals. Because Parsons' model theoretically captures both individual and collective levels of analysis, it has the potential of capturing meaningful data across multiple levels of analysis. If this connection between Parsons and Hochschild can be demonstrated, researchers may be able to use Parsons' model to look at the goals of the individual level phenomenon of emotion work and make inferences about the connection between certain types of individual and collective level goals.

Methodology

This primarily qualitative study was based on a naturalistic design (Lincoln & Guba, 1985). The qualitative element was supported by a quantitative survey element as a triangulation device. A not-for-profit organization established in 1946 and associated with aerospace and national defense agreed to be the research site for this study. The membership of over 160,000 people in this organization is primarily composed of Air Force active duty members, Air Force Reserve component members, veterans and retirees; however, membership is also drawn from civil service personnel, cadets, and civilian individuals who have never experienced military service, many of whom are affiliated with aerospace industry. The sample from this study was drawn from the professional staff, the Board of Directors, and the senior leadership of the states.

Four methods of data collection were used (individual interviews, observations, surveys, and document analysis) to provide a measure of validity through data-collection method triangulation (Patton, 1990; Yin, 1994). Documents reviewed included letters and e-mails from organizational members, videotapes, field books, and organizational publications. The Dealing with Feelings survey (Sashkin & Jones, 1987) served as a data-collection method triangulation element and was administered to 242 members of the professional staff, the Board of Directors, and the leadership of the states. The 25 (9 women, 16 men) individuals interviewed for the study were selected from those organizational members who returned the survey. This ensured that a triangulation point was available for all interview participants. Participant observations were conducted among the volunteers at a state

meeting, a Board of Directors meeting, a convention exhibit, and several luncheons, dinners, and cocktail parties. Traditional observations were conducted of the staff members at the National Headquarters.

Over 800 pages of transcribed interviews and correspondence were analyzed using NUD*IST software. The four functions of systems, as defined by Parsons (1951), were used as the primary codes. Open coding (Strauss, 1987) was used within the larger system codes for greater refinement of the data. Emotion work and the specific emotions associated with the emotion work performed were also part of the primary coding set. Data identified as "emotion work" was automatically included in the study. Each reference to emotion work was assessed to determine if it could be connected to one of the Parsonian functions. As will be discussed later, all references to emotion work actions were easily connected to the functions of Parsons' theory of action.

"Disinterested" colleagues performed coding and data interpretation verification. Three colleagues familiar with the Parsonian framework (1951) coded an excerpt of the data set, resulting in an agreement rate of 89% between the researcher and at least one colleague on the Parsonian component of the analyzed excerpt. When the emotion work codes were added, the agreement rate dropped to 68%. However, this is not surprising. First, the outside coders were more familiar with Parsons than they were with Hochschild. As they focused on classifying actions according to the Parsonian framework, it appeared that they often forgot to add what emotion was associated with the action. Further, the outside coders had only words on a page to guide their perceptions. As the interviewer, I had the benefit of recalling gestures and facial expressions, as well as listening to the taped interviews and hearing vocal inflections. Using an anthropological approach, however, I made the final decision in a qualitative sense regarding which codes to apply to the transcripts after considering comments from outside coders.

In addition, seven scholars with a basic understanding of the theoretical framework, yet unfamiliar with the research site, reviewed the findings and interpretations for consistency. Two staff and two volunteer members of the organization also reviewed the final document for accuracy of interpretation. Finally, ANOVAs were conducted using the overall Dealing with Feelings survey score and the score from an "emotion work" subscale to ensure the survey responses of the interviewed sample were not significantly different from the larger surveyed sample.

Results and Conclusions

The ANOVAs indicated that the interview sample was not significantly different from the larger surveyed sample on either their overall score regarding how they dealt with feelings ($p < .09$) or their subscale score regarding the extent to which they suppressed their emotions ($p < .23$). This gave added credibility to the findings that emerged from the interviews. In general, those individuals who claimed in the interviews that they tended to express their feelings also tended to have emotion work subscale scores that supported this claim. Interestingly, however, these same individuals also tended to have a higher number of emotion work actions identified in their interview transcripts.

There are several possible reasons for this finding. First, the longer interviews contained more incidents of emotion work. In addition, many of the *expressed* emotions described in the interviews may have appeared as emotion work in other contexts. For example, one volunteer thoroughly described her feelings about gender discrimination in the organization and, in her closing comments, made an off-hand remark that she would never let anyone else know how she felt about that subject. Also, the self-report nature of the study may have influenced the responses. Several respondents who claimed to be expressive indicated that performing emotion work was not genuine and, therefore, socially undesirable. One volunteer remarked, "I wouldn't [evoke an emotion], because it would be untrue." Finally, it is also conceivable that those individuals who report themselves to be more expressive are more aware of their feelings and, thus, are able to recall more experiences of emotion work.

The findings and interpretations are presented as they were analyzed, culminating in an assessment specifically related to the research question itself. First, emotion work actions were identified and sorted according to demographic characteristics that emerged as particularly relevant among the respondents. Next, thematic interpretations of the emotion work actions are presented as they were associated with each of the four functions of social systems. Once emotion work actions were identified, categorized, and interpreted, it was possible to assess the underlying purposes for which these actions were taken. Thus, the first analyses formed the foundation on which an assessment of the *purposes* of the emotion work could be conducted.

Out of the 605 participant references to emotion, 174 were emotion work actions. The vast majority of emotion work conducted was suppression of negative affect, especially anger. Evoking positive affect was also mentioned, most frequently by female staff members in the performance of goals associated with adaptation. A new form of emotion work, "veiling", appeared in this study as the simultaneous performance of suppression and evocation. Some of these emotion work actions had become so natural they had become "habits of mind" (Dewey, 1916/1944). When the sample was differentiated by gender and by organizational position (staff vs. volunteer),

women and staff members tended to perform more emotion work. This was particularly true for the female volunteers, who tended to perform the most emotion work. Women comprised only 8% of the senior volunteer leadership of this organization. Among the staff, women tended to be clustered at the mid- and staff level positions that Hochschild (1983) identified as particularly oriented to the performance of emotion work.

The central finding of the study was that the organization was facing an identity crisis due to both the changing nature of society and technology, and the increasing age of its membership. The modal age group in this organization was over 70. At a state meeting, one member commented that, "In a couple of years we'll be holding our meetings in a nursing home." Many of these older individuals who fought so hard to create a separate "air force" seemed to struggle with the concept that the organizational mission now included both "air" and "space." Others struggled with what constituted the mission of the organization since air and/or space forces could be found in all service branches of the United States military. Were they to support the United States Air Force? Or did they support aerospace power regardless of the service branch? Issues such as these formed the core of the identity crisis in the organization. The findings from the four themes associated with the system functions could all be interpreted as manifestations of this identity crisis.

Emotion work actions were associated with each of the four system functions of Parsonian theory (1951), demonstrating that the framework could be used to categorize and interpret emotion work. The vast majority of emotion work actions conducted in this organization were focused on internal organizational goals as opposed to the "customer orientation" goals that served as the focal point in other studies. This highlights that earlier emotion work studies did not capture what may be the richest source of emotion work in organizations—the daily interactions between organizational members. Latent pattern maintenance, or culture, received the most emotion work action references. The majority of staff emotion work actions were clustered in the integration function and associated with communication issues. The majority of volunteer emotion work actions were clustered in the latent pattern maintenance function and associated with discrimination and diversity issues.

The adaptation theme was associated primarily with the staff perception that they functioned as the economic "invisible hand" that guided the organization. As such, they needed to hide their true feelings from their customers, the volunteers. One senior staff member commented, "as a staff person, and with my work ethic, it was ... go out there and promote it, the [organization]." One mid-level manager on the staff discussed her growing frustration with the frequent interface with volunteers, for whom she always had to put on a "fake" smile, and the toll it took on her personal life. Nevertheless, she always attempted to shield her true feelings from the volunteer, her customer.

The goal attainment theme was associated mostly with the volunteer perception that emotions constituted a "monster" that needed to be "controlled" in order to accomplish the mission. Interestingly, this theme, in particular, highlighted the difficulty experienced by active duty and veteran Air Force members in differentiating their organizational experiences from their active duty Air Force experiences. They frequently discussed actions associated with the Air Force when asked to discuss organizational actions. For example, there was a common perception among these individuals that those in the profession of arms cannot allow themselves to share their true feelings about the events of combat (or other situations for that matter) or they will not be able to perform their mission. The most poignant discussions of emotion management were from a retired senior officer whose father had survived the Bataan Death March during World War II and who had himself been shot down during a combat mission in Vietnam. He remarked that emotions are something "that you need to combat internally, within yourself. If you're not afraid, you don't understand what's going on. It's just whether you can conquer the monster or not."

The integration theme was associated with "turf wars" which occurred among staff and volunteers. These turf wars most frequently concerned "biting [one's] tongue" on issues related to the control of information flow within the organization. Although the senior staff perceive that teamwork identifies the nature of the organization, the junior and mid-level staff have a different perception. They believe that teamwork only appears when the organization is sponsoring a major event, such as the national convention. During these times, the organization operates in a matrix structure. During daily operations, the organization is a siloed hierarchy in which directorates within the organization implicitly compete with one another.

Finally, the latent pattern maintenance theme was associated with "duty, honor, country" so often connected to the military culture. Symbolic rituals associated with those killed, missing in action, or prisoners of war generated a wide variety of emotion management. Several active duty and veteran Air Force members discussed how they held back tears during a ceremony performed in honor of prisoners of war (POWs) and those missing in action (MIAs).

The primary issues associated with latent pattern maintenance, however, concerned the suppression of emotion related to gender diversification. The "white, male, preferably pilot" culture associated with the military spurred the suppression of negative affect associated with diversity issues. One female volunteer remarked, "I

certainly feel a sense of being, *certainly*, not on an equal footing with, and never *will* be able to attain an equal footing with, the men who are in this organization... I really feel that there certainly is a bit of discrimination toward women in this organization." Another female volunteer, a military pilot, described a discussion she had with an older male volunteer who believed that only (male) pilots should be leaders in the organization. She apparently refrained from indignantly telling the male volunteer that she has "to take off my skirt to put on my flight suit." Ironically, I found myself performing emotion work under similar situations in this organization. At one point, I held back anger and disbelief as I listened to an interview participant insist that the scholarship committees should refrain from awarding spousal scholarships to women who were not pursuing careers which would complement their military husbands' careers. He also argued that the women's extracurricular activities were too often spent in professional associations instead of the PTA and church activities that should occupy their time.

Although not specifically included in the design of this study due to the focus on the "action" components of the conceptual framework, feeling rules emerged as an additional theme in the findings. The social dimension proved to be an important guide for individuals as they conducted emotion work. Much of the emotion and the emotion work seemed to be almost "unconscious" in nature, contrary to Hochschild's conception of the phenomenon. Shortly after the surveys had been distributed, one staff member was overheard commenting, "What do emotions have to do with organizations?" Another very senior, retired Air Force officer returned his survey, largely unanswered, with a comment that, "In general, I do not feel." An unsolicited description of this individual by an interview participant, however, revealed that he showed a great deal of warmth and compassion in interpersonal encounters. Thus, either this officer is doing an extraordinary job of evoking unfelt emotion, or, after more than 30 years of military service and many combat experiences, he has internalized the emotion work to such an extent that he does not recognize the emotions he is actually feeling and how he is working with them.

The preceding analyses about emotion work and the functions associated with the emotion work actions formed the foundation to analyze the specific research question guiding this study, for what purposes did individuals conduct emotion work in this organization. The purposes for which individuals conducted emotion work were substantially different between staff and volunteer members. Staff members were much more likely to perform emotion work for individual purposes than volunteers were. When staff members *did* perform emotion work for organizational purposes, it was most frequently in association with the adaptation function in the form of organizationally mandated customer service. The volunteers, however, conducted very few actions for strictly individual purposes. The vast majority of their actions were conducted for organizational purposes. This distinction between volunteers and staff members highlights the two prominent subcultures that appeared in this organization. The staff members were more often driven by the economic bottom-line of the organization than the volunteers were and tended to "look out for themselves." The emotion work conducted by the volunteers tended to be driven by a value-commitment to the organization. Because both staff members and volunteers performed emotion work for organizational purposes, there is support for the argument that emotion work may be considered a meso-phenomenon that bridges the gap between individual and organization.

Contributions to Practice

The outcome of this study is an extension of theory that provides practitioners and researchers with a model to view emotion work in organizations and to understand how that emotion work is associated with organizational action. Neurobiological work spanning more than a hundred years has revealed that emotion is a pre-requisite to communicate meaning to others, to make decisions, and to take action on those decisions (Damasio, 1994). This study found that members try to hide their negative feelings about issues and actions associated with the organization. Because much of the emotion work is internal and at least some of that emotion work is unconscious, it raises the possibility that decision-making authorities in the organization are overlooking it. For example, one volunteer commented that he had offered his support for a policy change in the organization, but he personally didn't like the change and didn't believe it would succeed. Such masking of true feelings may have negative consequences for organizational effectiveness (Gilley & Coffern, 1994). This study suggests that the roots of failed organizational action may be found by uncovering emotion work actions associated with early decision-making processes. While these emotion work actions may not have a direct and immediately visible impact on the organization, there are certainly some indirect and perhaps long-term outcomes from such actions for the organization. This study identifies emotion work action as an area that could enable HRD practitioners to help surface and resolve masked issues before the organization suffers harm.

The theoretical connections observed in the application of Parsonian theory to classify emotion work actions offer a concrete means to provide feedback to the organization on issues that are salient to individuals in the

organization. This study demonstrated that Parsons' (1951) model of social systems can be extended to more rigorously view the phenomenon of emotion work. As the importance of emotion constructs continues to gain attention among practitioners and scholars, this extension of theory offers a useful mechanism to study one such construct—emotion work. Although this study should not be generalized without caution, it is possible that the finding of emotion work as a meso-phenomenon may apply to other settings. If so, emotion work as classified and interpreted using Parsonian theory (1951) may enable a more detailed study of phenomena of interest to many HRD practitioners, such as organizational learning and organizational culture. By focusing on the issues around which emotion work is acting as a potential barrier to learning and culture change, HRD practitioners may be able to facilitate positive change in the organization.

In particular, if emotion work can be considered a meso-phenomenon that offers a distributed view of the organization (Glynn, 1996), it may offer a methodological alternative to studying organizational learning. Many studies of organizational learning have focused on identifying factors associated with organizational learning and then asking questions targeted to those specific factors (e.g., Croswell, 1996; Watkins, Yang, & Marsick, 1997). This is especially true for the qualitative studies that incorporated the four systems functions of Parsonian-based, Schwandt (1994) Organizational Learning Model (e.g., Croswell, 1996; Hinds, 1995). When using this approach, it is possible that researchers are more likely to find what they wanted to find because the study was *designed* to provide the theoretical support they were looking for. However, by identifying a type of instrumental *action* associated with the four functions of the model that can be accessed in a population without reference to the four functions themselves, researchers and practitioners may argue that the findings hold even greater credibility for applicability in an organization.

By tracing the types and purposes of emotion work by basic demographic characteristics across systems functions, it was possible to identify two distinct subcultures in the organization. The subcultures had distinct issues and events that generated their emotion work actions. While staff members tended to focus on communication issues, volunteers tended to focus on discrimination issues. This gives the opportunity to not only provide feedback on how the organization might improve perceived problem areas but also reconcile the two subcultures. It is very possible that other, similar distinctions would occur in other organizational contexts. This would enable the HRD practitioner to provide more detailed feedback to an organization that is directly related to critical systems functions of that organization. Practitioners in voluntary sector organizations should be especially aware that volunteers and professional staff members are likely to have fundamentally different purposes behind their actions in the organization. Such a difference in perspective requires tailored approaches for each subculture on issues such as organizational change, reward systems, and recruitment.

Practical applications may also be derived from the findings associated with gender differences in the performance of emotion work. This study supported Hochschild's (1983) premise by finding that women conducted more emotion work than the men did. Gallois (1993) suggests that the higher the power differential between two groups, the more aware individuals from the less powerful group must be regarding emotional contexts of interactions. She specifically refers to power differentials between men and women. It may be possible to discern the extent to which actual power differentials between genders exist in a given organization by focusing on the differences in frequency, context, and type of emotion work performed. This would enable an HRD practitioner to provide interventions to reduce the power differentials in critical areas associated with organizational performance. Among other benefits to the organization, this would increase the involvement of otherwise qualified individuals. Again, generalization of these findings should be taken with caution; nevertheless, HRD practitioners should be aware that female organizational members may be conducting a great deal of emotion work relative to their male counterparts.

This study found that emotion work definitely played a role in the actions taken by the members of this not-for-profit organization. A model that can be used to view emotion work in organizations may be useful to both scholars and practitioners. From Parsons' (1951) analytical model, scholars can create formal propositions (Turner, 1991) to account for an important, but relatively little studied, aspect of organizational life. Practitioners can use this knowledge to increase individual performance within the organization and, hopefully, to increase a variety of overall organizational capacities. Both scholars and practitioners alike can use this information to develop mechanisms to help organizations face the inherent existence of emotions in organizational processes and "manage" (Fineman, 1993) that existence in accordance with individual and organizational needs.

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Communities in the Workplace

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This study focused on developing an empirical definition of "community in the workplace." A total of 401 usable critical incidents were gathered from 119 employees in 22 different organizations in the U.S. and Canada. These factors emerged: team work and participation, mutual respect and responsiveness, investment in professional growth, concern for improvements and performance, recognition of effort, and investment of personal time and interest. They were compared with frameworks developed by Gardner (1990) and Goffee and Jones (1996). Implications for future HRD practice and research were provided.

Keywords: Organization Culture, Workplace Community, Critical Incident Method

Interest in the impact of the community on individual and group behavior has existed for some time. The earliest work on "community" focused on the community in which people live. Various approaches were used to define "community." One approach (e.g., Hoyt 1939; Park, 1915, Park & Burgess, 1925) focused on the relationship between spatial and physical features in the city and certain social characteristics, such as crime rates. This work led to various zonal hypotheses concerning communities. A second approach, called "social area analysis," focused on the social characteristics of an area (e.g., Shevky and Williams, 1949). Another approach concentrated on the personal interactions among residents (e.g., Greer, 1956). Yet another approach used the services provided within an area to define the community (e.g., Warren, 1975). Finally, Russ-Eft (1979) gathered individuals' perspectives to define the neighborhood in order to create an approach to measuring neighborhood quality of life.

More recently, Rossi (1994) introduced the notion of communities within schools and the impact of the "community" on students at risk. Specifically, Rossi and Stringfield (1995) undertook to identify "conditions that must be met in transporting isolated successes to the entire population of schools serving at-risk students." One of those two conditions was labeled "community in schools." They defined "community" as "the deep-structure fabric of interpersonal relations ... this fabric permits a shared frame of reference and supports mutual expectations."

Moving from neighborhoods (as communities) to schools (as communities), we might also consider the workplace as a community. John W. Gardner (1990), for example, recognized the importance of community for leadership. He claimed that a leader can raise employee morale and improve productivity by encouraging a sense of community. Similarly, Brown and Duguid (1991, p. 40) suggested the importance of evolving communities of practice as "significant sites of innovating."

In the wake of actions leading to disintegration, such as mergers, de-layering, and downsizing, the management and research literature abounds with discussions of corporate culture. For example, Marks and Mirvis (1998) and Mottola, Gaertner, Bachman, and Dovidio (1997) examined how corporate cultures led to success or failure in mergers. Michaels (1998) described why many valuable employees resigned from BBN Corporation, a technology company at the forefront of Internet development, after being purchased by GTE. "They weren't in fear of losing their jobs. They were just worried about what this new culture was going to be like."

Goffee and Jones (1996) claimed that such corporate culture can be described as "community." "Culture, in a word, is community. It is an outcome of how people relate to one another. Communities exist at work just as they do outside the commercial arena. Like families, villages, schools, and clubs, businesses rest on patterns of social interaction that sustain them over time or are their undoing" (p. 134).

Goffee and Jones (1996) suggested that sociology provides an identification of critical features for community, namely sociability and solidarity. Sociability refers to the friendliness of the community members, while solidarity consists of a community's ability to focus on shared objectives. Using these two factors, they conveniently derived a two-by-two matrix showing four types of community: networked, mercenary, fragmented, and communal. The empirical data providing support for these four types consisted of descriptions of four organizations fitting each type.

Although case study research can yield important information (Mulder, in press; Russ-Eft, in press; Yin, 1984/1989, 1993, 1994), the selective presentation of cases, as appeared in Goffee and Jones (1996), provides little in-depth understanding. First, one wonders whether the two selected factors are the only ones critical for

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reader is left with questions as to whether one can describe the variety of organizations using such a simple taxonomy.

Another approach to describing "community" in the workplace involved the development of a theoretical framework. Gardner (1991) identified ten characteristics or ingredients posited to lead to healthy communities. These were (1) wholeness incorporating diversity, (2) a reasonable base of shared values, (3) caring, trust, and teamwork, (4) effective internal communication, (5) participation, (6) affiliation, (7) links beyond the community, (8) development of young people, (9) a forward view, and (10) institutional arrangement for community maintenance.

The purpose of the present study was to identify the critical components of community within the organizational environment based on actual human experiences rather than opinions and attitudes of the researchers or theorists. The research questions were: (1) What are the dimensions of community in the workplace? and (2) To what extent are these similar to or different from those described by theorists?

Methods

Subjects

A total of 119 employees participated in the study. They were from 22 different organizations (gathered from 100 contacted organizations) located throughout the U.S. and Canada. The types of organizations included business services, manufacturing, publishing, high tech, defense, utilities, wholesale/retail, and education. A critical incident study attempts to obtain a sample of the full range of experience. Thus, it is not necessary to secure a representative sample of employees; instead, it is important to obtain a sampling of employees from diverse organizations and with diverse experiences.

Instruments

A critical incident questionnaire was constructed, reviewed internally, and pilot-tested with five human resource directors. The instructions included the following:

> In some workplaces, people genuinely like and work well with one another, and management policies, to a greater or lesser extent, support teamwork and the development of trust. We want to learn about the types of conditions, events, or behaviors that may foster **community** among co-workers.
>
> Please think of an incident at work involving your **co-workers** that **positively** affected your sense of community or theirs. Please describe the incident in as much detail as possible, focusing in particular upon the actions of the people involved.

Other critical incident questions asked about negative situations and about positive and negative situations involving management. In addition, demographic questions were included.

Procedures

A research staff member contacted representatives of various organizations. The person described the purpose of the study and the survey form and then requested the cooperation of the representative in administering the form to a group of employees. In most cases, the representative agreed to obtain responses from five to ten employees, but in some cases, they agreed to survey only two or three employees. Survey forms and instructions were then sent to the participating representatives. The staff member followed up with the representatives by phone and fax until the completed forms were received.

Analysis

The responses to each question were separated, along with information identifying the characteristics of the participant who made the response. Each incident identified as "critical" by the participant, or judged by the analyst as so intended, was considered as a separate incident. If a response included more than one incident, duplicates of

the entire response were made. Such a procedure allowed the analyst to physically separate the different incidents for classification purposes, while still being able to identify the entire response.

A total of 401 usable critical incidents were obtained from the sample. The only responses not used in the analysis were those that were clearly not an incident or were uninterpretable. The analysis of the incidents followed the guidelines set forth by Flanagan (1954, 1974) and are listed in Russ-Eft (1979; 1995).

Results

Demographic Results

The respondents represented a variety of different backgrounds and workplace experiences. The sample included exempt and non-exempt workers, approximately equal numbers of men and women, and all major classifications of age, education, years with the organization, and ethnicity. It should be noted that these demographic characteristics (i.e., education, age, gender, ethnicity) were identified as major contributors to the workplace experience.

Results from Critical Incident Analysis. Based on the analysis, six major factors emerged. These appear in Figure 1 along with a brief description.

Team work and participation	People feel that they are working as a team, participating fully in decisions and efforts to get the job done.
Mutual respect and responsiveness	Individuals respect each others' skills and interests and respond to perceived needs.
Investment in professional growth	People invest time and money in formal and informal training.
Concern for improvements and performance	Managers improve the work place or work procedures; co-workers do their work well.
Recognition of effort	People recognize others' efforts, and they appreciate rewards for good performance.
Investment of personal time and interest	People give personal time and attention to individuals who need or merit it.

Figure 1. Listing and description of factors identified through the critical incident analysis.

Under each factor listed in the following paragraphs, we summarized the incidents related to managers' behavior and those related to co-workers' behavior. In addition, we provide some positive and negative incidents as examples.

1. Team work and participation. Managers build teams and encourage the participation of workers in setting vision and goals, making decisions, planning, solving problems, improving productivity, and rewarding effort. They introduce formal programs and consultants to increase workers' management of their own tasks. They trust the judgment and recommendations of teams, delegate responsibility to them, and keep them informed of what they need to know to do their job right. On an individual level, managers support ideas and initiatives, select workers to participate in special projects and reinforce decisions they have delegated. In negative situations, work is "micro-managed," indicating a lack of trust in workers, people are not kept informed, and workers feel they are left out of events leading to changes, large and small, that affect their work.

"I was assigned a project by my supervisor ... I gave him my opinion and he said, 'It sounds great. Go ahead and do it.' He was available for questions ...and told me twice I did a great job."

Co-workers cooperate with each other to get the job done well within their own teams or on cross-functional teams and special projects. Individuals pitch in to handle an overload, compensate for absent co-workers, do extra tasks, or handle crises and urgent situations. They assist co-workers, with or without being asked, and help them improve technical skills. When needed they cooperate to redivide the labor and redelegate tasks. In negative

situations, not all team members pitch in, some feel excluded, or conflict arises over responsibilities. People don't offer or refuse to ask for help from co-workers, and as the workload becomes overwhelming, stress increases.

[Negative] "One of our team members feeling work overload does not communicate to management how she feels, creating stress not only for her but upsets fellow team members."

2. Mutual respect and responsiveness. Managers are responsive to their teams, make themselves available, encourage expression of opinion and need, listen actively, and take action to resolve problems brought to their attention. They also respect individuals, treat poor performance with assistance, not reprimand, counsel those under stress, and defend those who are mistreated. Managers pitch in when their groups or individuals need extra hands. In negative situations, managers ignore poor performance, fail to support individuals who are mistreated, and ignore people's opinions. They behave unprofessionally, are temperamental, rude, and moody. They make unreasonable demands and sometimes put their own interests ahead of the team's and the company's interests.

[Negative] "The manager held a mass meeting to communicate items of great importance to all who work here. The meeting was held in an area that requires earplugs when we work in or pass through it. Questions were not fully answered. The key items were not well covered and the manager appeared evasive on some issues."

Co-workers express mutual respect for each others' skills and trust in their intentions and abilities. They solve interpersonal problems, including those involving cultural and racial bias. They feel that they are well informed of what is happening in the workplace. In negative situations, co-workers treat others with disrespect, sometimes building cultural or racial barriers. They take their complaints to the boss rather than to the co-worker concerned. They display animosity, are unable to solve interpersonal disagreements, and mistrust each other in times of external threats to the group. They feel misunderstood and ill informed.

"We hold round table meetings on a regular basis. ...These round tables are designed to be positive where recognition and praise is given from one co-worker to others."

3. Investment in professional growth. Managers demonstrate that they value workers by sending them to off-site training sessions, encouraging on-site training, and supporting individual pursuits of continuing education. They provide cross training of team members. In negative situations, managers refuse to invest more, laying workers off, cutting salaries, or denying them the training and/or moral support they need to continue.

"The manager continues to support human resources development even in tough economic times. This encourages me. Funding training programs gives the message that the company is dedicated to survival (long-term) and has confidence in its present employees."

Co-workers appreciate training in technical and interpersonal skills, and they enjoy becoming acquainted through training events with people outside their immediate work areas.

"Recently we all met in Chicago to receive training on the new benefits plan. We all brought our fears, anxieties, apprehensions, and enthusiasms to the training."

4. Concern for improvements and performance. Managers pay attention to improving work conditions and the work environment. They introduce initiatives to improve the quality of products or services. In negative situations, managers slight quality or safety measures, do not put resources into making working conditions more tolerable, and do not provide adequate technical or administrative support.

[Negative] "We were having a major piece of equipment moved from one plant to another. Our maintenance men were wanting to do things right, which included cleaning and doing preventive maintenance on it during the move. The manager did not heed this and gave them such a short time frame to move it that the extras could not be done."

Co-workers take pride in high-quality work and positive results from their efforts. They often exceed their own expectations or those of others, and are pleased about doing so. They help to maintain good working conditions. In negative situations, workers are ashamed of or discouraged by low quality that is tolerated.

"We recently had a piece of equipment that broke down. This equipment has failed in the past and the maintenance repair time was two to three days. The equipment was repaired this time in one day. It was good coordination and an all out effort by the maintenance department to get the job done."

5. Recognition of effort. Managers recognize and reward good performance, sometimes with salary increases, sometimes with special events, and other times more informally, by praising groups and individuals in private or in public. They are fair and impartial in their recognition. In negative situations, efforts go unrecognized, or they create bad feelings when they are perceived as unfair or partial to certain individuals or groups, including cultural or racial groups. Managers also offend by talking negatively about some people in front of others.

"One day I did a good job—high production quantity and quality. My supervisor came and said 'thank you.'"

Co-workers give useful feedback on performance to each other and feel that their peers—as well as management—recognize their effort. They take pleasure in both giving and getting useful feedback. They are also proud to feel part of their team when they encounter outsiders at some event, even when "recognition" is not formally part of the event. In negative situations, credit or blame is misplaced, and some workers feel excluded from recognition they deserve. Sometimes they think the feedback they receive is malicious or harmful.

[Negative]"Why am I a team member at 1:00 in the morning when we are putting together reports and presentations, but not when recognition is received?"

6. Investment of personal time and interest. Managers sponsor company events and invite workers to social events. They give personal support in times of crisis, allowing more flexibility and privileges and helping as they can. In negative situations, managers completely ignore the personal lives of their workers.

"I had a close friend become terminally ill. I was encouraged by my boss to leave early on occasion and to take a weekend for myself."

Co-workers share positive experiences outside of work, such as preparing for company events or having lunch on special occasions. They enjoy getting better acquainted with co-workers, sharing more of themselves, including feelings. They appreciate company-sponsored social events and community-service activities. Like managers, they show concern for each others' welfare and need in time of crisis. Some make personal sacrifices for co-workers in urgent situations, including taking salary cuts.

"I had a birthday three months after I began work and everyone had a party for me. They usually have parties for 'landmark' birthdays, but this event did help me feel like I fit in."

Comparison of Critical Incident Results with Previous Conceptualizations

We compared data collected on instances of community in the workplace with Gardner's (1991) description of community and the Goffee and Jones (1996) dimensions. First, the factors appearing in the data and in these previous discussions of community will be highlighted. Next, the factors described by these earlier theorists that fail to appear in the critical incidents will be discussed. Finally, we will present the factors appearing in the data but *are* not mentioned by these other theorists.

1. Factors Found in Common

Teamwork and participation. One of Gardner's dimensions, that of caring, trust, and teamwork, appears in the Goffee and Jones' article as sociability. It includes an atmosphere of cooperation and connectedness; a sense of belonging and identity; a spirit of mutual responsibility; and an awareness by members that they need one another.

Some of our data in the theme of Participation and Teamwork correspond to this category. These instances deal with workers' sense of meaningful participation in work activities. They pitch in to get the job done, give and receive help, and take pride in being placed on special projects.

Gardner describes a category called "participation," which corresponds generally – though not precisely – with our data. Gardner describes an array of democratic processes (two-way flow of influence and communication; dispersed network of leaders at every level; voting, attending meetings; consensus building, coalitions, collaboration, compromise). The critical incidents are those in which workers participated in setting visions, goals, and plans; solving problems, and improving productivity. Both sources specifically mention community problem solving.

Under "participation," Gardner discusses the importance of effective leadership. The critical incidents in this study include instances of leadership only indirectly, as comments on managers who set a climate for respect, trust, and teamwork. Gardner's concern for participation reflects the choice that individuals in a community have of a level of participation; some choose to be active leaders; some to participate at less prominent levels, and some not at all. In organizations, by contrast, everyone is required to participate to some extent to earn a salary, and the significance of their participation, in some respects, corresponds with their position in the organization hierarchy.

Mutual respect and responsiveness. These data include instances of respect by managers and workers for the views and skills of others. Managers listen to workers and take action based on what they hear. Cultural barriers are bridged, and interpersonal problems are solved. Such features appear consistent with Gardner's notions of "caring, trust, and teamwork," as well as Goffee and Jones' descriptions of "sociability."

Furthermore, Gardner's category, "effective internal communication", included civility, common language, active and continuous communication between units, common meeting ground, and listening. Several of these, namely civility, listening, and active communication between units, appeared in the critical incidents with the factor Mutual Respect and Responsiveness. The incidents cited in the data are typically negative: co-workers or managers whose behavior toward others is *not* civil, and managers who do *not* listen to workers. Others, however, cited the positive instances of community through the regularity of communications, meetings in which information is shared, useful feedback is given, and managers listen.

Recognition of effort. Recognition of effort was another of the factors emerging in the critical incident data. Similarly, in the Goffee and Jones' article, recognition might be seen as an important component of the dimension labeled "solidarity." In Gardner's description, this factor appears within the category "affirmation" and receives passing mention under the categories of (1) "caring, trust, and teamwork" and (2) "participation." Respondents to the critical incident data collection cited tangible rewards, such as salary raises, recognition events, and being selected for special projects as instances of recognition. They also cited expressions in public and in private of praise and thanks for their effort.

Gardner also writes of recognition and thanks for hard work. He describes a way in which communities recognize individuals that seems to capture the spirit of some of the critical incidents: "The healthy community has many ways of saying to the individual, "You belong, you have a role to play, and the drama has meaning." It is this more than anything else that accounts for the sense of identity so characteristic of community members (p.21).

Investment of personal time and interest. All these schemes recognize the contribution of personal time to a sense of community. A major distinction between Gardner as contrasted with our data and Goffee and Jones rests on the distinction that workers in an organization expect to be paid for their labor, while those who work for the community outside of work are usually asked to volunteer. Yet even paid workers sometimes "participate" in the organization (in Gardner's words) and offer their own time. They "volunteer" to help out with social functions and to help co-workers or subordinates in times of crisis. Managers offer personal invitations or take personal time to support workers. Goffee and Jones recognize the importance of such investment in the dimension labeled "solidarity."

2. Factors Not Appearing in the Data

Gardner described eight general attributes that are barely mentioned in the critical incidents gathered from the workplace. We will discuss these in turn.

Wholeness incorporating diversity. For Gardner, this expresses the main function of a community, that of governing conflicting demands and fostering cooperation. The organization's role, in contrast, is to provide goods and services economically. Toward this end, the organization can insist on cooperation and unanimity of goal – at a certain level – and be less tolerant of diverse demands. The respondents did not comment on coherence, pluralism, or fragmentation, except in instances of bridging cultural barriers. Also, they usually focused on their immediate work group, within which goals are common and interactions regulated.

Shared values. Gardner claims that a sense of social purpose is "the most important ingredient" of community, and Goffee and Jones view it as critical to their definition of "solidarity." Nevertheless, the respondents in this study did not say much about this dimension of the workplace. The exception might be criticisms of co-workers whose disregard for procedures for quality and safety evidence conflicting values.

Forward looking. Gardner views this dimension as vital to a community, while Goffee and Jones fail to mention this aspect of organizations. Certainly, goals are fundamental to organizations, and planning for the future is taken for granted. Perhaps as a result, the critical incident respondents do not mention forward planning, except in terms of being included in activities that engage them as individual participants.

Links beyond the community. Although discussed by Gardner, the critical incident respondents make only tangential reference to this dimension. They discuss clients or customers when referring to their own performance. Occasionally they mention conflict or cooperation between units, such as divisions. Further probing would be needed to determine whether the respondents consider the other units as being within their own community. In any case, this aspect of Gardner's formulation of community receives no attention in the Goffee and Jones' work.

Institutional arrangements for maintenance. This constitutes Gardner's category for matters of governance. The critical incident respondents did not specifically mention governance, which in organizations would probably be synonymous with "management." The exception would be those incidents already identified in reference to participation in decision-making. Again, Goffee and Jones fail to discuss a similar dimension.

3. Factors Appearing in the Data but Not in the Previous Work

Investment in professional growth. Such investment appears both in the critical incident data and in Gardner's conceptualization as an indicator of community in the workplace, but the two differ somewhat in their formulation. Gardner specifies a sound educational system that includes preparation for effective leadership and participation. He also mentions informal training – learning from community members, some who may serve as mentors, and from participation in community activities. He sees formal and informal education primarily as an investment the community is required to make in its children and youth.

He does mention training as a means of support. Both his labeling of this factor as "development of young people" and his conceptualization seem to limit the emphasis of such development to children and young people at home and at school, without recognizing the extensive development activities and opportunities in the workplace. In the critical incident study, however, respondents refer to the training they receive, either on-site or off-site, not only as an investment in individuals but also as a means of improving their effectiveness and rewarding their efforts.

In contrast to the critical incident results, Goffee and Jones (1996) fail to identify development activities of any kind as part of corporate culture. Thus, both Gardner and Goffee and Jones appear to neglect the importance of human resource development in the creation of community in the workplace.

Concern for improvements and performance. This factor encompasses such areas as improvements in the workplace and work procedures and doing the job well. It relates to the quality of work, which, is certainly a concern of organizations offering products and services. One aspect of the Goffee and Jones formulation of "solidarity" involves this concern for performance and a "low tolerance of poor performance" (p.136). This aspect does not, however, appear in Gardner's formulation. This raises the question of whether the quality of schools, libraries, and other community services might or might not affect one's sense of community.

Discussion

The current study identified six factors critical to community in the workplace – at least as such community is experienced by those in organizations. The results more or less agree with previous theoretical formulations of community, as discussed by Gardner (1991) and Goffee and Jones (1996). Indeed, in terms of the Goffee and Jones formulation, the present study provides further definition of the two dimensions, sociability and solidarity.

Areas of disagreement, particularly with Gardner's description, seem to revolve around the context for "community." Gardner deals with community in the geographical or political sense of neighborhood, town, or city. As a result, certain dimensions, such as "institutional arrangements for community maintenance," seem less critical when dealing with community in the workplace.

The results of the present study indicate the viability of the concept of community in the workplace. It is a concept that exists not only in theoretical formulations, but also in experiences of people within organizations. The critical incident method provides the link needed to identify community characteristics most relevant to people within organizations. By drawing upon workplace experiences, it provides the framework for addressing the needs of the workplace community through specific policies and programs.

The study also reveals the complexity of the concept of the community in the workplace. It is composed of factors covering a broad range of concerns. Although 401 incidents were collected, some of the categories are not as well described as others. Flanagan and Russ-Eft (1975) encountered a similar situation in defining personal quality of life, as did Russ-Eft (1979) in defining neighborhood quality of life.

Contribution to Human Resource Development

These results can be used as a framework for measuring and monitoring the status of the workplace community. Under each category, available indicators of current status can be identified (e.g., production measures as an indicator of Concern for Improvement and Performance) or new indicators can be developed (e.g., employee survey on teams as an indicator of Teamwork and Participation). Such indicators can be objective or subjective. Indeed, using both types of measures and determining the relationship between them can help to ensure valid measures.

In addition to measuring and monitoring, the results of this study provide a framework for determining the impact of HRD interventions. They reveal a broad range of potential impact areas. Presumably a well-designed intervention would have impacts in many or most of these areas. Planning, development, and evaluation of such HRD interventions should, therefore, focus on these diverse factors.

Finally, given that the emergence of the factor "investment in professional growth" in these data, practitioners should explore opportunities for using HRD interventions to affect community in the workplace. Certainly new employee orientation provides one opportunity to instill a sense of community to new members of that workplace. Another would involve identification and support for communities of practice for enhancing development and innovation, as discussed by Brown and Duguid (1991).

Limitations of the Present Study and Areas for Future Research

Given the need for a well-defined set of dimensions defining community in the workplace, this research represents a first step. It provides an initial framework, but the data needs expansion. To obtain increased confidence in the stability of the framework, the data collection must include additional types of organizations, such as educational institutions and government agencies. The data set must represent the full range of organizational types.

In addition to representing only certain types of organizations, the data relies heavily on U.S. and Canadian-based organizations. A next step would be to extend this data collection to other countries, allowing for a comparison with the present results. Since today's organizations are rapidly moving to becoming global organizations, this research must examine workplace communities in other parts of the world.

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Show Me the Money: Moderators of Satisfaction for University Administrators

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This study presents an analysis of organizational survey data collected from 870 members of the non-academic or administrative staff in a large university setting. Results indicated significant differences between respondents who had prior experience in academia versus those with industry or corporate experience in terms of levels of job satisfaction. Specifically, those workers with prior experience academia were significantly more satisfied with their current jobs than their counterparts. Additional findings and implications are discussed.

Keywords: Employee Satisfaction, Organizational Surveys, University Employees, Academic Setting

Given the significant impact that employee attitudes and perceptions can have on individual and organizational performance, the study of predictors and correlates of job satisfaction represents a key area for applied organizational research. In fact, over the past 40 years considerable research has been done to investigate the predictors, correlates and/or outcomes of job satisfaction (i.e., what predicts job satisfaction and what does job satisfaction, in turn, predict). While research indicates that individuals who like their work are likely to have lower absenteeism and turnover rates (Organ & Bateman, 1986), and perhaps even live longer (Palmore, 1969), research has also shown that the majority of American workers are less than completely satisfied with their present jobs (e.g., Church, 1995; Lawler, 1990; Quarstein, McAfee, & Glassman, 1992; Sullivan & Bhagat, 1992). Even individuals who have what might classify as excellent positions--e.g., jobs that are intrinsically motivating and rewarding—often report low levels of job satisfaction. Although it is unclear if the precursors of such perceptions are due to primarily internal (e.g. attitudes regarding senior leadership, organizational culture, job-person fit, reward systems) or external factors (e.g., economic trends, increased competition for jobs, aggressive downsizing industry practice), this trend has serious implications nonetheless for the day-to-day functioning and management of contemporary organizations. Managerial behavior and resulting employee levels of job satisfaction and organizational commitment, for example, have been linked through research to a variety of outcomes such as reductions in performance, product quality, and customer responsiveness, as well as increases in turnover (e.g., Buchko, 1992; Cohen, 1993; Golembiewski & Sun, 1990; Steers & Mowday, 1987; Waclawski, 1996). Clearly, given the impact that such negative attitudes can have on an organization, it is in the best interest of key policy and decision makers (e.g. organizational leaders, senior managers, and HRD and OD professionals) to have an accurate and more complete understanding of the relationships among their employees' perceptions and attitudes. To date, however, most of the research conducted on job satisfaction has been focused on and collected in private organizations (e.g., industry and corporations), while the realm of academia has remained largely unexplored. Additionally, academic institutions are particularly interesting in the context of understanding job satisfaction because of their unique cultural and structural characteristics (e.g., a highly professional and educationally focused organizational system). To this end, the purpose of the following study is to contribute to the field of HRD and OD by focusing on the correlates of and relationships regarding job satisfaction in a primarily academic setting.

Correlates of Satisfaction

Although almost all organizational systems suffer from the typical concern of "how to motivate their employees", the situation is particularly acute in university settings for the "regular" individual--i.e., someone who functions in a non-academic or administrative position. Besides having to work in a somewhat unusual hierarchical structure, the educationally biased culture found in academic institutions can be disconcerting for anyone with experience in a typical corporate setting. One of the results of such an environment is that administrative employees

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often feel like "second-class" citizens because of their educational backgrounds and/or position status as compared to the more well respected faculty population. This is unfortunate because these are the people that make the organization's operational systems function. Moreover, given the tendency to provide staff salaries below industry standards in universities, it is no surprise that these types of institutions experience a variety of employee conflicts, many of which can and do have an impact on their individual performance. However, salary alone does not predict job satisfaction. In a study conducted by The National Center for Productivity and Quality of Working Life (1978), for example, job satisfaction levels of private versus public (in this case government) firms showed that employees working in private firms were, on average, more satisfied than their public counterparts (74% vs. 64%, respectively). However, there were no significant differences between these two groups with respect to levels of satisfaction with pay or benefits. Other correlates with job satisfaction in other research studies have included age--i.e., employees under 30 were less satisfied than those over 30 (Sheppard & Herrick, 1972)--individual attitudes towards work (Herzberg, Mausner, Peterson, & Chapwell, 1955; Staw & Ross, 1985), and job level--i.e., professional and managerial workers report the highest levels of job satisfaction (Herzberg et al., 1955). Thus, based on these studies, one might expect there to be significant differences in satisfaction levels and their correlates in managerial and other types of non-managerial populations.

Beyond the differences already noted, however, one could easily argue that any organization whose work force is primarily focused on serving the needs of others (e.g., faculty, students, parents, etc.), will likely suffer considerable hiring, training, and development costs if negative attitudes are pervasive among their administrative employees. Clearly, one outcome of such a situation is greater turnover, which cannot be good for ensuring smooth operation. Thus, in the university setting, the management of employee perceptions through changes to corporate culture, reward systems, work group climate, and managerial behaviors is a critical issue for systemic organization development and improvement efforts (Burke, 1994; Schneider & Bowen, 1993; Sheridan, 1992; Wilkens & Ouchi, 1983).

Given the prevalence of universities, the importance of these issues, and the death of research in this area, the purpose of the following paper is to contribute to the literature by providing a detailed assessment of the key predictors and moderators of employee satisfaction among the administrative or non-academic employees in a university setting based on data collected during a recent organizational survey effort. In this study employee or job satisfaction will be defined as "the constellation of a person's attitudes toward or about the job" (Organ and Bateman, 1986, p.337). More specifically, employee satisfaction is considered to be a function of an individual's satisfaction with different aspects of his or her job such as supervision, pay and the work itself (Organ and Bateman, 1986). It is hoped that the results of this study will prove applicable to other university settings as well as other public institutions and/or service based staff positions in related types of organizational settings.

Method

A paper and pencil mail survey was administered to the officers of administration of a large Ivy League University located in the northeastern United States to assess existing levels of job satisfaction. These survey questionnaires were administered to all university officers of administration during a three-month period between July and September 1997. In total, 870 of the initial 2400 surveys distributed were returned for analysis yielding a response rate of approximately 36%. Although this is lower rate of return than what many practitioners prefer (Church & Waclawski, 1998), it is not an uncommon percentage, and is still within acceptable ranges for analysis purposes.

In terms of demographics, the officers of administration who responded to the survey were predominantly Caucasian (72%), female (62%), and normally distributed in terms of age. The majority of respondents indicating having worked at the university either between 1-5 years (34%), or over 11 years (35%). For the most part, these data corresponded well to the population distributions on these same variables provided by the organization suggesting that the present data were in fact representative of the larger population.

The survey content was initially constructed and then refined based on input from various officers of administration within the university at different levels. This process occurred through: (1) numerous meetings and interviews with senior human resources staff; (2) a series of focus groups comprised of representatives from different departments and levels; and (3) an iterative pilot testing procedure. In total, item instrument development process took several months. The final measure was comprised of 107 items which, although lengthy, was still within acceptable limits for this type of assessment effort (Church & Waclawski, 1998). In general, the reliability coefficient was quite high--computed at .96 overall--for the instrument suggesting the iterative process had indeed results in a stable measure.

Results & Discussion

Survey responses were examined using a variety of statistical approaches with two specific goals in mind: (1) to identify major relationships among employee perceptions of working conditions and organizational factors (e.g., culture, senior management, reward and benefit systems, structure) on satisfaction; and (2) to explore potential moderating variables for these relationships and/or differences various in organizational sub-groups.

Prior Work Experience

Of particular interest and importance in the data was the impact of prior work experience of the administrative staff (self-identified as being from either academia or industry) on the types of issues and concerns raised, as well as the differential impact of their perceptions on employee satisfaction. Based on a series of oneway ANOVAs (controlled for Type I error), significant and meaningful perceptual differences existed between these two groups such that administrative employees with primarily academic backgrounds were far more *positive* about the university than were their counterparts who had crossed over from industry settings. Major areas of contention exhibiting these effects included the perceived adequacy of the compensation offered, the degree of cooperation and support received from peers, the degree to which people were treated fairly and equitably, overall levels of job satisfaction, and feelings of trust and respect in the workgroup. The only areas in which this trend was reversed concerned employee ratings of specific benefits that are traditionally less favorable in organizational settings (e.g., regarding tuition exemption, the amount of vacation; the quality and coverage provided by medical insurance, availability of training). In short, aside from some of the benefit options, staff members with industry experience found the climate and working conditions of their academic experience to be somewhat lacking by comparison.

Given these trends, some additional predictive modeling was done in an attempt to understand the drivers these perceptual differences. Figures 1 and 2 provide an overview of these regression results (see following page). Despite the clear presence of multicolinearity issues inherent in this type of a one-shot survey process (Church, 1995), the difference in the two regression models does suggest clear distinctions in how employees familiar with academic settings feel about their work as compared with people transplanted from more corporate or industry related backgrounds.

Gender Effects

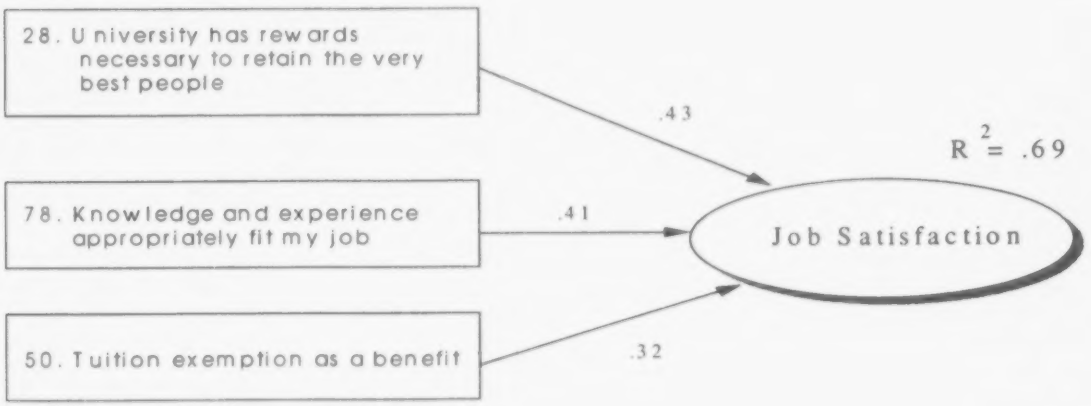
Next, the data were examined more carefully for differences in ratings effects by gender. An interesting finding emerged in the data based on the results of an overall ANOVA model of summary scores for all survey items. Specifically, men reported significantly higher ratings of the university overall, across the entire 107 item instrument, than did women ($M = 3.09$ vs. $M = 3.00$) $F = 3.73$, $p < .05$. Next, a series of follow-up ANOVAs were conducted to examine differences at the item level. These analyses revealed that men gave significantly more favorable ratings to the university on 27 out of 107 items (or approximately 25% of the survey) than did women staff members (see Table 1). In general, men were more satisfied with the treatment that they received at the university, and the pay, benefits and incentives given by the university. Moreover, men reported a greater sense of pride in working for the university than did women and higher levels of satisfaction with their jobs.

Based on these results, it would appear that, in general, male staff members had a better "on the job experience" than did their female counterparts in this university setting. Perhaps this is pattern is indicative of the stereotypically male dominated academic culture. On a related note and in support of this hypothesis, survey participants did have the opportunity to respond to several open ended items on the survey wherein they indicated as much. One of the more frequent remarks from women respondents, for example, was that the university was plagued by "cronyism" and that the "good old boys" mentality was pervasive, thus creating a less than optimum environment for women at the university. This factor alone may help explain some of the difference in satisfaction levels between male and female respondents, and suggests that future change efforts in universities may need to be directed at this gender gap first before moving on to other agenda.

Tenure Effects

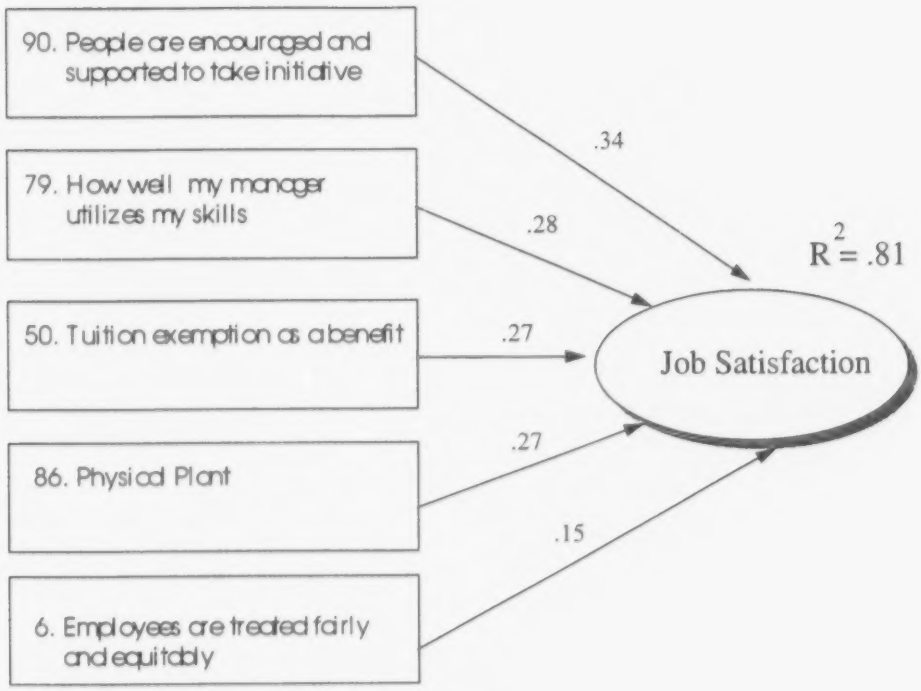
In addition to gender, the relationship between job tenure and ratings of the university as a place to work were also examined. While no significant effects were found at the overall level (i.e., across all survey items by tenure), some interesting differences did emerge at the individual item level (see Table 2 for details). For example,

it was evident that newer employees were significantly more positive about their managers' ability to inspire and motivate employees, the presence of career development opportunities, the amount of coaching and mentoring available, and the balance between work and personal life. Although less positive in general, middle tenured employees (i.e., with 6-10 years experience), were more optimistic in their assessments regarding some healthcare benefits and the quality of workspace conditions at the university. Given their position on the cusp of making a long-term commitment, however, this increased level of criticism is not surprising. Finally, more senior employees (i.e., those with 11 years tenure with the university or more), gave significantly higher ratings to items associated with most of the personnel related benefits offered by the university, such as the quality of life insurance, savings plans, medical coverage, spending budgets, and sick leave. This group was also more positive about the conditions in their workspace, as well as having more pride and being significantly more satisfied overall.


28. University has rewards necessary to retain the very best people
78. Knowledge and experience appropriately fit my job
50. Tuition exemption as a benefit
.43
.41
.32
$R^2 = .69$
Job Satisfaction

NB: numbers adjacent to arrows are beta weights.

Figure 1. Predictive model: satisfaction for academic workers.



NB: numbers adjacent to arrows are beta weights.

Figure 2. Predictive model: satisfaction for industry workers.

Although one might point to a myriad of factors, these findings are most likely indicative of a combination of (a) those things that are valued by each of the three groups and (b) what is offered by the organization at various levels. More specifically, newer (and probably younger) employees would arguable be most interested in career development and advancement opportunities. Thus, this is both the area they tend to focus on and, in a university setting fraught with would be mentors, is most likely to occur representing a good match. Middle level employees, on the other hand, are likely to be in that in between job stage, where commitment decisions are to be made and the quality of all things including benefits and worklife balance are being considered. Employees with 11 years tenure or more, however, are likely to have already made that commitment to the university and are therefore likely to be more positive regarding the quality of the benefits offered (since this was probably a factor in their decision in the first place) as well as their overall satisfaction.

In sum, based on these results it is apparent that differences do exist in the predictors and correlates of employee satisfaction among non-academic employees in university settings. For the most part, issues of compensation levels, overly bureaucracy structures and policies, and a lack of unity across departments were key. Moreover, there appeared to be clear differences in perceptions with respect to prior work experience, gender, and levels of tenure that should be considered when OD and HRD practitioners are involved in making policy related performance management and personnel decisions.

Table 1

Significant Univariate ANOVA Item Results by Gender

Survey Item	Female (n = 534)	Male (n = 323)	F
2. University Admin. Promotes a sense of unity and shared values	2.18	2.40	8.14
5. I have confidence in the University Admin.	2.61	2.86	10.21
6. employees are treated fairly and equitably	2.74	3.00	9.66
9. managers provide performance evaluations on a regular basis	2.36	2.67	10.62
12. managers respond appropriately to poor performance	2.90	3.11	5.36
16. managers make best use of people's skills and abilities	2.98	3.25	8.21
19. managers work w/ employees to establish performance objectives	2.93	3.17	6.25
21. managers encourage open, two-way communication	3.32	3.55	5.91
22. managers allocate limited resources effectively	3.13	3.42	10.21
23. managers provide employees with info. to carry out their jobs	3.17	3.42	7.82
25. managers reward and recognize good performance	3.04	3.25	4.28
26. employees are given incentives to improve their performance	1.98	2.23	8.50
28. University offers rewards necessary to retain the best people	1.98	2.17	7.02
32. pay and benefits compare to union members on campus	2.87	3.15	5.13
33. pay and benefits compare to support staff	3.02	3.38	9.91
34. pay and benefits compare to similar positions on campus	2.40	2.67	6.60
44. promotions are based on a fair and objective assessment of skills	2.48	2.77	9.99
46. satisfaction with benefits compared with other organizations	3.49	3.23	10.05
48. satisfaction with medical benefits compared with other orgs.	3.22	3.08	5.66
54. satisfaction with savings/investment plans compared with others	3.39	3.25	4.07
56. satisfaction with sick leave compared with other organizations	3.82	3.67	5.08
78. knowledge and experience appropriately fit the job I currently hold	4.12	4.32	7.23
82. ventilation in workspace meets expectations	2.51	2.70	4.12
83. air quality in workspace meets expectations	2.43	2.71	10.46
89. employee morale at the University	2.31	2.47	4.74
91. satisfaction with my job	3.25	3.41	4.00
93. pride in working for the University	3.65	3.91	10.83

N.B. All *F*s are significant at $p < .01$.

Limitations & Suggestions for Future Research

In general, there are several limitations to this research that hinder the generalizability of the results presented. First, only one organization was studied. Future research should focus on replicating the differences exhibited here across a variety of universities and other academic organizations.

Another limitation of this research is the specific nature and size of the sample studied. Although the entire population of the officers of administration were used for this research, differences in other groups that were not studied might serve to either enhance or refute patterns observed. Future research should be directed at looking at a broader array of demographic characteristics (i.e., attitudes towards work, job level, supervisory experience, etc.) that may be correlated with and/or predictive of job satisfaction.

Finally, the present research is only correlational in nature; therefore we cannot with any certainty assess the predictive nature of the relationships involved. Future research should attempt to incorporate additional external measures of satisfaction taken before the assessment of current levels of job satisfaction. This would provide a more empirical baseline measure of job satisfaction against which to measure current and future levels of employee perceptions.

Table 2

Significant Univariate ANOVA Item Results by Tenure

Survey Item	< 5 Yrs (n = 341)	6-10 Yrs (n = 178)	11> Yrs (n = 291)	F
2. University Admin. promotes a sense of unity and shared values	2.39	2.12	2.21	4.16
6. employees are treated fairly and equitably	3.01	2.72	2.70	7.07
8. managers inspire and motivate people to do the best job possible	3.38	3.07	3.16	4.50
13. managers promote career development in new assignments	2.97	2.74	2.67	4.24
14. managers coach and train people in new assignments	2.69	2.35	2.38	6.18
15. managers spend time discussing career development plans	2.37	2.01	1.86	14.50
17. managers enable a healthy balance between work and personal life	3.33	3.07	3.05	4.58
19. managers work w/ employees to establish performance objectives	3.16	2.98	2.84	4.66
25. managers reward and recognize good performance	3.29	2.87	3.05	6.31
37. employees are aware of training opportunities that exist	2.86	3.48	3.63	39.14
45. employees have a good understanding of their benefits	3.46	3.54	3.79	7.92
46. satisfaction with benefits compared with other organizations	3.23	3.36	3.64	10.23
52. satisfaction with life insurance compared with other organizations	2.81	2.79	3.05	7.18
54. satisfaction with savings plans compared with other organizations	3.24	3.25	3.49	5.67
55. satisfaction with spending accounts compared to other companies	3.28	3.35	3.52	7.07
56. satisfaction with sick leave compared with other organizations	3.66	3.76	3.88	4.39
58. satisfaction with quality of medical care	3.67	3.95	3.86	4.76
59. satisfaction with service physician's office	3.76	4.03	4.04	7.52
60. satisfaction with service covered by medical plan	3.39	3.50	3.68	6.75
61. satisfaction with convenience of medical plan	3.35	3.47	3.62	4.31
78. knowledge and experience appropriately fit the job I currently hold	4.07	4.20	4.32	4.72
80. employees feel there are opportunities to develop in the Univ.	3.32	3.01	3.00	6.12
84. workspace provided meets expectations	2.62	2.87	2.91	4.46
85. lighting in workspace conditions meets expectations	3.21	3.48	3.46	5.46
86. furniture in workspace meets expectations	2.90	3.15	3.20	5.57
89. employee morale at the University	2.51	2.32	2.22	6.28
91. satisfaction with my job	3.29	3.10	3.44	5.49
92. the Univ. encourages a balance between work and personal life	3.24	2.87	2.90	10.34
93. pride in working for the University	3.78	3.52	3.84	5.16

N.B. All *F*s are significant at $p < .01$.

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Questioning the Viability of a Women's Network as a Management Development Activity

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The focus of this study was the continued viability of a women's network within an organizational system. Once an active part of the company culture, it apparently had ceased to meet. We chose this example to research the current role of women's networks, their contributions and limitations, and the alternative mechanisms that may be replacing them. Quantitative and qualitative data were used to draw conclusions for this network and to pose implications for HRD.

Keywords: Women's Networks, Informal Learning

In the past decade numerous studies have been conducted examining women's progress in organizations. Many of these studies have emphasized developmental opportunities that promote women's learning and advancement within the corporate framework (Bierema, 1996; Gordon & Whelan, 1998; Ohlott, Ruderman, & McCauley, 1994; Ragins, Townsend, & Mattis, 1998; Tharenou, Latimer, & Conroy, 1994; Wentling, 1996). This body of literature suggests that women should seek challenging and important assignments and gain access to line positions, engage in mentoring relationships and training opportunities, and develop a clear career strategy. Frequently mentioned in these studies is the importance of women networking with others as a means of learning and advancing within the organization. For example, Bierema (1996) found that the women in her study ". . .took advantage of relationships— particularly mentoring, peer support, and networking relationships — to help them develop and function in their organization's culture" (p. 157). Further, Bierema reported that executive women ". . .used networking for understanding informal power structures, strategizing, providing and giving feedback, and sharing support" (p.158).

Some organizations, recognizing the importance of networking as a development tool, have implemented network groups exclusively for women or for minorities. The literature reinforces the need for these types of groups. For example, Lewis & Fagenson (1995) suggested support networks as an alternative to single-sex training in a critique of management development strategies for women. Gordon & Whelan (1998) recommended that organizations provide support groups to help women as they approach midlife and later career issues. Rosener (1995) advocated the use of networks and councils as a strategy "to address the underutilization of women . . ." (p. 159).

Problem Statement and Theoretical Framework

According to Friedman (1996) there are four major distinguishing characteristics of networks. These characteristics include: a social identity, such as gender or ethnicity; an intra-organizational entity; being "self-controlled and self-organized," and being recognized publicly (p. 323). Friedman (1996) found that network groups were perceived most effective at achieving the following objectives: getting social support, providing support for younger employees, and getting informal business and career advice (pp. 339-340). Network groups were perceived to be much less effective in fighting discrimination and influencing company policies. Friedman concluded that "there is clearly a role for advocacy on the part of network groups, . . . but the unique strength of network groups is their ability to reshape social networks and communicate with management, rather than serve as a policy-making or policy-influencing body" (p. 341). Networks often serve to reduce the feelings of marginality and isolation felt by individuals not considered part of the majority. Mehra, Kilduff, & Brass (1998), in a study of social networks, found that women and racial minorities tend to make identity and friendship choices within their group (women to women, African-Americans to African Americans, etc.) when they are "relatively rare" in the social context. They conclude that: "To achieve integration in organizations, it may be necessary to first recognize heightened pressures for within-group solidarity among under represented group members" (p. 450).

However, there is some evidence that homophily, the degree to which individuals interact with those similar to them (Ibarra, 1993), may limit one's access to those in power. Brass (1985) found women in integrated workgroups had more access to the dominant coalition and more influence, than women in all-female groups. These

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findings led him to conclude that "encouraging women to form networks with other women in the same organization may be unnecessary or, at worst, nonproductive" (p. 340).

The research on networks informs us of the configuration and patterns of networks and the utility of career networks (Ibarra, 1995; Mehra, et al., 1998), but more information is needed regarding the learning that occurs as a result of networks and the evolution of these networks. For example, does this type of network cease to be needed when a significant number of females or minorities reach a certain level in the organization? Will these networks continue to fulfill an important function as organizations change?

Research Questions

This study explored the continuing viability of a structured women's network in an organization nationally recognized for its concern for female employees. One goal was to determine what role, if any, does this type of network still have in promoting continuing career progress for women in organizations. Another was to discover what other mechanisms hold promise as informal learning opportunities for women, if the network structure is not longer viable. Questions explored in this study included the following:

* Why do some women choose to participate in such networks? Why do some choose not to participate?
* What kinds of learning takes place in a structured network for women?
* Has the women's network structure outlived its usefulness as a social support system?
* Are structured women's networks still viable in prompting women's career progression?
* What initiatives (mechanisms), if any, are taking the place of structured women's networks?

Research Methodology and Background

A large, international service industry corporation that frequently has been listed as one of the best 100 companies by Working Mother magazine was the site of this study. We had some history with this organization. In the past, we had conducted focus groups to evaluate their Women at Work program and met periodically with the Women Executives (WE) group. The latter was the focus of this study. Once an active part of the organizational culture, the network seemingly had ceased to meet as a formal entity. The apparent unplanned demise of this structure prompted our questions about the role of women's networks in this organization as well as in others.

Every women above a certain position level in the organization is considered to be a member of the Women Executives group. Historically, as with most organizations, some women have chosen to take leadership roles in the network, while others have ranged in their commitment from those who attended meetings consistently to those who chose not to participate. Our research was designed to reach all of these women, to obtain the richest span of data possible.

This was a quantitative study employing survey methodology. The survey method was chosen for several reasons. First, the use of a Likert scale survey format to determine interest in participation and reasons for non-participation has roots in the work of Scanlan & Darkenwald (1984) and Darkenwald & Valentine (1985) examining deterrents to participation in adult and continuing education. Second, the survey permitted reaching all of the 135 members of the network in a timely way that allowed them to respond anonymously. Survey responses were mailed directly to us as researchers acting independently of the corporation, to encourage participants to be open with their answers and to state their concerns more freely than they might with an internal inquiry. Of a total of 135 surveys mailed, 68 usable responses were received, yielding a return rate of 57%.

The 38 item Likert scale survey was created by the researchers. Two leaders of the network were consulted extensively during the development process to ensure that the survey was comprehensive in scope and accurate in its use of industry terms. There are four major sections of the survey: reasons for choosing to be active in the network (i.e., "I wanted to learn more about the corporate culture), reasons for choosing to be inactive (i.e., "I don't believe in initiatives designed to segregate men and women"), their perceptions of the current need (or lack of it) for the network (i.e., "This group can contribute to the corporation's success" and "The current corporate climate is sufficiently inclusive of women"), and means other than the network that respondents use to build alliances and to create learning opportunities within the organization (open-ended questions at the end of the survey).

Results and Conclusions

Quantitative Results

In gathering information, it was important to establish how active each respondent had been in the network, recognizing that participation choice might be indicative of interest in the potential continuation or demise of the group. Frequency analysis revealed the following percentages of self described activity level: 45% "somewhat active," 34% "not active," 12% "active," and 9% "very active." Written comments explained that several of those listed as "not active" were women who have become eligible for membership during the time the network has been in hiatus and who expressed interest in participating if the group continues.

The descriptive statistical analysis summarized several interesting points about the respondents. Most of the women in the study had been employed by the company for over six years, with 22% noting an employment record of over 20 years. However, as with many organizations, entry into officer ranks has been less forthcoming, with 55% indicating they have been officers for less than six years. An item set regarding professional identity showed that the respondents identified highly with their roles within the corporation as a whole, their business divisions and their departments. They identified least with the roles of "executive" and "woman executive."

Descriptive and correlation analyses yielded few surprises regarding reasons to participate or not to participate in the network, and rationale for continuing or disbanding the group. Each segment will be highlighted briefly in this discussion.

Those who had been active at some level were asked to complete a segment focusing on potential reasons for participating in the group (see Table 1). The item "It was an effective way to make contact with other women in the organization" yielded the highest level of agreement. It was followed by "I wanted to support the advancement of women in the organization" and "I enjoyed the social interaction." The item receiving the least endorsement was "I thought it would advance my career." This group of responses appears to reflect interest in building relationships with other women over a goal of individual professional gain.

Inactive members responded to an item set that reflected typical deterrents to participation in management development activities. The item that showed the highest level of agreement was "I didn't have enough time." The one that showed the least endorsement was "I thought it would be a waste of my time." While both refer to time as a factor, the former clearly is based on priorities, which suggests the network just did not fit in; while the latter is a judgment against the value of the group. Although the result is the same (non-participation), the rationales are quite different; suggesting that even non-participants might see some value in the network.

For the segment regarding reasons the network still is needed, "The glass ceiling continues to exist..." yielded the most affirmation. While the most agreement among reasons the network is no longer viable was "Priorities within the company have changed." Interestingly enough, these juxtaposed statements may be describing similar phenomenon, for example a company that once focused on improving the internal environment for its female employees may now be faced with the need to turn attention more fully on outside competition, and in the process may fall back on traditional hierarchical processes and value systems.

Predictably, items stressing the perception of value in the network, such as "I enjoyed the social interaction" and "Women desire to network with other women" were intercorrelated ($r=.564$, $p=.01$). Another example was the intercorrelation of activity level with social interaction ($r=.416$, $p=.01$) and activity level with the item "There is no other group for women to talk about business, professional and social issues." ($R=.330$, $p=.01$). Similarly, items reflecting on the perceived ineffectiveness of the group such as "I thought it would be a waste of my time" and "Women should move beyond segregated networking/ management development opportunities" were intercorrelated as well ($r=.614$, $p=01$).

Three open-ended questions at the end of the survey asked respondents to indicate if other activities had replaced the network in providing social support or professional development and what the focus of the network should be if it continues. There was a section for general comments as well. Forty-two respondents answered at least one of the open-ended questions. The content from the open-ended items were analyzed separately by each researcher and then analyzed together to determine if common themes existed.

Very few common themes were found, however respondents most frequently reported that work for nonprofits outside of the organization and the development of their own personal network had replaced the executive women's network in providing social support and meeting their professional development needs. Time pressures were reported by some respondents as being a major issue when pursuing any activities to meet their needs. One respondent wrote: "Work has become so intense it is hard to make time for anything. . . "

Table 1: Means and Standard Deviations

Item	N	Mean	SD	
I participated because:				
Effective way to make contact with women in the organization.		44	4.55	.6271
Enjoyed the social interaction.	45	4.02	.8391	
Wanted to learn more about management.	45	3.18	1.029	
Wanted to learn more about the insurance/finance business.	43	3.05	1.112	
Wanted to mentor other women.	43	3.19	.9065	
Wanted to find a mentor.	43	3.02	1.080	
Wanted to learn more about the corporate culture.	45	4.00	.8790	
My colleagues participated in the group.	44	3.36	.9667	
Wanted a professional support network.	45	3.73	.8634	
Thought it would help me advance in my career.	44	3.02	.9997	
Wanted to support the advancement of women in the organization.	45	4.18	.8605	
I chose not to participate because:				
Thought it would be a wasted of my time.	23	1.91	.9002	
Don't believe in initiatives designed to segregate men and women.	23	2.96	1.147	
Didn't have enough time.	24	3.50	1.063	
Had enough networking opportunities already.	23	2.48	1.039	
Location of the meetings was not convenient.	23	2.78	.9023	
Concerned how my colleagues would perceive my participation.	23	1.96	.8245	
Enough management development opportunities.	23	2.39	.8388	
Saw no need for the group.	23	2.22	1.166	
The group still is needed because:				
Women do not receive as many development opportunities as men.	65	3.66	.8888	
Women desire to network with other women.	65	3.88	.8928	
The glass ceiling continues to exist.	64	4.16	.8585	
Members learn from the programs.	64	3.67	.8918	
Is no other group for women to talk about business, professional, social issues.	64	3.66	1.057	
The network is no longer needed or viable because:				
No one has time to attend programs and functions.	51	2.96	1.216	
Women have reached parity with men.	53	1.74	.7112	
Women should move beyond segregated networking opportunities.	51	3.02	1.157	
Other management development opportunities have replaced the need.	53	2.32	.9359	
Current corporate climate is sufficiently inclusive of women.	51	2.10	.9221	
Corporate climate discourages segregated programs.	50	2.80	.9476	
Other networking opportunities exist that have replaced the need.	52	2.10	.7478	
Priorities within the company have changed.	47	3.45	1.100	
There is a lack of interest.	51	3.08	1.055	

1=Strongly Disagree, 5=Strongly Agree

Qualitative Data

When asked what the focus and format of the network should be if it continues, the largest portion of individuals indicated the group needs to focus on providing networking opportunities and developing its' members through substantive programs. Some indicated that the network needs to change. One woman suggested the group needed to be "reinvented." Another suggested that the group be combined with other minority groups or opened to other women managers. The exclusive nature of the group bothered a few respondents. One woman wrote:

> We should be expanded to include all women in management, not officer level only. I believe affinity groups should practice inclusivity versus exclusivity as much as possible, without losing site of its mission (sic).

A few also indicated it was time to disband the group, either due to lack of support or because the group was no longer needed or effective. One respondent suggested: "I think the WE group represents a group who served a valuable purpose at one time but perhaps it is not needed now."

However some women adamantly felt the group is needed now more than ever. Most of these individuals indicated that the current corporate climate was making it difficult for women within the organization. One responded:

> I think WE is sorely needed — particularly at this juncture when executive women are losing jobs or experiencing reduced responsibilities. Women officers need to join forces and have a voice in responding to the negative changes many of us are experiencing.

Data Summary

Taken in full, the responses reveal a key philosophical difference in how the organization and the network are perceived. On one side are those who believe strongly that the network serves a professional and social purpose. While respondents in this segment seem drawn to the network primarily for its social interaction, they cite inequities in women's opportunities as a reason it continues to be needed. The opposition holds the perception that women need to stop being segregated from the rest of the organization and recognize that priorities have changed for the company as well as for them as individuals, and therefore, a women's network is no longer a viable entity.

The gap between these two groups is unlikely to diminish because members on each side have surveyed the same situation and interpreted it very differently. Even if they could reconcile their diverse perceptions into a compromise, it would be unlikely to meet the needs of either constituent group adequately. The moment of women's solidarity on this issue appears to have passed. Even if the network is revived by those interested in its continuation, it could not claim to represent the views of "women executives," the way some corporate caucus and advisory group do. It is unrealistic and naive to believe that any one group could ever speak unequivocally for all of its constituents; however, to be an effective advocate, members need to agree on some basic tenets as a foundation. The responses to this survey indicate that on the topic of an executive level network for women, this group of female executives themselves cannot come to agreement. This case prompts speculation about whether other organizations are facing similar circumstances. Now that women are in management positions, have women's networks lost the momentum and the singular focus that gave them strength, or do they simply need to reassess their functions within organizations? What new goals are being set for the advancement of women, and how can they best be met? These questions remain open for future research on internal single sex network systems.

Implications

Structured networks ostensibly were developed to provide access to social support, professional development advice, acculturation information, and people holding power in the organization, because these resources were not readily available to women. Friedman (1996) has suggested that social support is a primary rationale for network membership, and many respondents in this study appeared to agree. They readily voiced their appreciation of the social contact provided by the network, but they were much less likely to note career advancement as a benefit. What the data did not reveal is if the dismissal of the latter accurately reflects the situation, or if the women subjects were less comfortable acknowledging their interest in furthering their careers through their relationships.

Research suggests that formalized career development initiatives are being supplemented by a variety of individual professional growth opportunities dubbed "informal learning." Networks can offer opportunities for these less formal learning opportunities, but at the same time, structured networks (with meeting times and membership lists) may be less viable in the current climate than they were only a few years ago. Organizational and individual priorities likely have changed over time and support for traditional networks may have decreased as a result. Additionally, some may argue that structured networks segregate female employees within the company, and as a consequence, perpetuate the status quo of women as separate and unequal partners in the organizational enterprise. The respondents in this study expressed these concerns, and they present a dilemma for human resource development professionals in this company and in others. No clear mandate came out of this research. Admittedly, the data set was small. The structure of the survey was such that not all respondents answered all segments, so the number of responses for some items was much smaller than the total return. Within those responses were clear contradictions about the perceived value and purpose of the women's network. The decision to revive, revise, or

remove this network will not be easy, because those who will be most affected by that decision are not in agreement themselves about the outcome they want. Some expressed interest in a forum for substantive programs to serve as learning experiences, but others' preferences were for an emphasis on social interaction. Some want the group opened to all women managers, but others would choose to have male and female executives together. While women still face a glass ceiling and inequities within the company, the liabilities of segregating female managers and executives from the mainstream and not focusing on the changing organizational climate remain as concerns, for this company as well as for others.

To abandon women's networks could be a regressive move, putting women once again in the position of trying to gain access from an inequitable position, and leaving them on the periphery of the organizational culture. Structured networks may not be the viable and valuable entities they were in the past, but should they be dissolved? If they are, what mechanism will replace them to offer social support and professional equity opportunities for women in corporate cultures? This project posed these questions, and while the results of the study offer some insights into the issues, they serve mainly to illustrate the complexity of this situation. While this research focuses on one company, the results have ramifications for other organizations as well. Women still are under represented in senior management. This is a human resource development concern. Perhaps it is time to reconsider past initiatives and determine what strategies have more potential for change as we approach the new millennium.

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The Changing Role of Training Consultants in Organizing Work-related Learning

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This study draws on interviews with training consultants in 19 different organizations to describe how their role is changing under the influence of a supposed tendency towards self-directed employee learning at the workplace. From a learning-network perspective, this tendency can be regarded as a move towards liberalization. Qualitative data analysis shows that no general claims can be made as to this tendency or the role changes associated with it. If any, it would be an increased focus on HRD standardization, which runs contrary to more liberalized learning arrangements, for the prevalence of which only partial evidence was found.

Keywords: Work-Related Learning, HRD Consultants, Organizational Change

Employees and managers in work organizations are increasingly expected to take on responsibility for individual and team learning (Poell, 1998). What is the impact of this tendency on the role of the training consultant? A significant amount of research has been conducted into job profiles of HRD professionals (McLagan, 1989; Van Ginkel, Mulder & Nijhof, 1994), but not as yet from the perspective of a tendency towards self-directed employee learning. Generally speaking, it is assumed that the traditional emphasis in the role of training consultants on delivery of pre-designed courses is being replaced or supplemented by a stronger focus on the development of multiple learning arrangements. Is this actually happening, and if so, what does this new role of training consultants look like in practice?

Theoretical Framework

In this study training consultants are viewed as strategic actors in a learning network who interact with managers and employees to organize learning programs by negotiation, collaboration, and participation processes (Van der Krogt, 1998). From this perspective, a learning network can have structural arrangements associated with a liberal, vertical, horizontal, and external type. In a *liberal* learning network, individual employees create their own sets of learning activities. The profile of this learning network can be labeled as unstructured and individually oriented, since there is little structure above the individual level. A *vertical* learning network is characterized by linear planning of learning activities. The management develops learning policies, which are translated into pre-designed learning programs by training consultants and delivered to the employees. In a *horizontal* learning network, programs develop incrementally while they are being executed. There are no pre-designed learning policies. These develop by learning from experience as the programs progress. Training consultants are process counselors in this type of learning network. An *external* learning network is coordinated from outside the organization by the professional associations of the employees. Learning programs introduce work innovations to the learners, who adapt their work themselves accordingly.

The tendency towards self-directed learning of employees can now be understood as a move from a vertical to a liberal type of learning network. The role of a training consultant changes accordingly, from designing and delivering training programs to facilitating multiple learning arrangements for individual and team learners. If full emphasis is placed on facilitating team learning instead of individual learning, the consultant's role is congruent with a horizontal learning network. And if a training consultant helps individual professionals adapt their work to innovations introduced by their professional associations, they are operating within an external network. Other strategic actors (e.g., employees and managers) are expected to influence the way in which the learning network is organized as much as training consultants do. A learning network is viewed as an arena where constant processes of negotiation and collaboration among the participants shape and change the way actual learning arrangements are

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organized. This actor-strategic perspective and the four different learning-network types (Van der Krogt, 1998) will be used to interpret the changes occurring in the roles of trainingconsultants.

Research Questions

This exploratory study aims to describe what changes are actually taking place in the roles of training consultants in organizing work-related learning. The following research questions are investigated to shed light on this matter:

1. What changes are occurring in the way work-related learning is organized?
2. What roles do training consultants play in 'new' ways of organizing learning, in relationship to the roles of other strategic actors?
3. What problems and barriers do training consultants perceive in 'new' ways of organizing learning?

Methodology

Procedure

In May 1998, 293 questionnaires were sent out to all UK based alumni (from 1991 onwards) of the University of Sheffield Master's Degrees in Training and Development, Continuing Education, Information Technology Management, and Networked Collaborative Learning (all delivered by distance learning). After six weeks, 103 had been completed and returned (= 35 per cent). The questionnaire asked alumni for global information about their willingness to participate in the research project, about the job they held, about organizational characteristics, and about their involvement in technological innovations. Fourteen (= 14 per cent) of the respondents indicated they were not interested in participating in the research project, for various reasons, such as retirement, career change, unemployment, and so forth.

An effort was made to single out the alumni with a responsibility for organizing other people's learning within the organization, including trainers, consultants, educators, HRD managers, line managers, and mentors. There were found to be 74 alumni fitting this criterion. Twenty-two of them were approached at random across the United Kingdom, cutting across smaller and larger organizations and across internal and external training consultants. Alumni were included in the final sample if they were willing to engage in an interview and if they had been recently involved in innovation processes. Face-to-face interviews were held with the 19 participants who met both these criteria in June and July of 1998. Interviews lasted approximately ninety minutes each and focused on the participants' changing role in connection with the move toward self-directed employee learning. A topic list was used containing open questions about the following elements:

- Organizational mission, structure, culture, clients.
- Participant's job, typical work activities.
- Current role as a training consultant, tasks and responsibilities, strategies in organizing learning.
- Role changes in recent years, future role.
- Problems experienced in work, barriers to organizing learning, possible solutions.
- Relationship with management and employees, their role in organizing learning, attuning different strategies and values.
- Role in a recent, typical project that involved employee learning or development.
- Status of the training department in the organization, and status of the participant as a 'learning facilitator'.

Data Analysis

Two to three page interview summaries were made by the interviewer and offered to participants for correction and legitimization. Seventeen summaries (= 89 per cent) were returned to the interviewer containing additional information. Analysis was performed using seventeen corrected and two initial interview summaries. A computer program for qualitative data analysis, called Kwalitan (Peters & Wester, 1990), was used to score 144

interview scenes. Each interview scene was scored using an average of two to three labels, resulting in 345 labels all together. In this process, a total of 126 different labels were used, which were then brought under 28 label headings. Finally, three groups of two meta-label headings each were used to categorize the data in accordance with the three research questions: 'Organizational Changes' and 'Tendencies in HRD' referred to the first research question, 'Learning Activities' and 'HRD Roles' to the second research question, and 'Problems and Barriers' and 'HRD Strategies' to the third research question. Counts were made to list how many out of 19 interviews with participants featured scenes filed under the various label headings. These frequencies are reported in the next section.

Results

General Characteristics of the Sample

Four participants are women, fifteen are men. Participants' ages range from 30 to 65, most of them are in their forties or early fifties. Seven participants work self-employed, while twelve are employed in a company. Organizations involved are in electronics (#), a church diocese (#), a trade union (#), a private hospital (#), health care, aviation, mobile phones, insurance, atomic energy, a fire brigade, banking, and chemicals. The four out of twelve organizations marked # are small or medium-sized companies. Five out of seven self-employed consultants work mainly for small and medium-sized companies, including schools, colleges, health authorities, local government agencies, manufacturing firms, and professional organizations. All but two participants have obtained an MEd in Training and Development from the University of Sheffield between 1992 and 1997, most of them in 1995 or 1996. One participant holds an MEd in Continuing Education. One participant holds an MEd in Networked Collaborative Learning.

The companies involved are very different organizations, if only in size. In Mintzberg's (1979) terms, their structures range from machine bureaucracies (insurance, banking, atomic energy, fire brigade), to professional bureaucracies (private hospital, health care), to adhocracies (aviation, chemicals, electronics, mobile phones), to simple structures (church diocese, trade union). Most organizations are evidently in a process of organizational change, which may be as a result of growth (electronics, mobile phones), down-sizing (atomic energy, chemicals), new markets or products (aviation), new policies (church diocese), new laws (fire brigade, private hospital, health care), cost reduction (insurance, banking), changes in funding (trade union), and so forth.

Organizational Changes

Participants report changes in the training budget (n = 8) as a result of down-sizing or government cuts, which leads some organizations to question the added value of the training department. Some organizations are changing their work structures (n = 3) via experiments with self-managed work, lean manufacturing or business process re-engineering. Other companies are changing their organizational structures (n = 2) to a functional organization or a matrix organization. These results are summarized in Table 1.

Table 1
Organizational Changes

Changes	n
Budget changes	8
Changes in work structures	3
Changes in organizational structures	2

Tendencies in HRD

No less than 17 out of 19 participants perceive a tendency towards standardization within the HRD function of organizations. Their training programs are increasingly based on competence or performance standards, mirroring a stronger emphasis on accreditation. Within the UK context, the system of national vocational qualifications

(NVQs) and government programs such as Investors in People reflect this tendency towards standardized HRD programs.

Twelve participants report that the responsibility for training increasingly rests outside the training department. Indications for this tendency are the fact that managers are expected to act as a coach to their employees. The use of train-the-trainer and so-called cascading programs points in the same direction. The work of trainers has become organizing and co-ordinating rather than delivering training. Training delivery increasingly means hiring free-lance trainers. Interestingly, five participants report that their organization has witnessed a decentralization of the training department, while three suggest it is rather a process of centralization that is characteristic of HRD within their organization.

Twelve participants stress the view that training has becoming more strategically aligned to the organization's mission, which has made the training department more credible. Training should support the business, and there should be no more laissez-faire training as there was before.

Several developments point to a tendency towards liberalization within the HRD function (n = 10), meaning that individual employees are increasingly made responsible for organizing their own learning. Participants emphasize the importance of self-directed learning, the possibilities of distance learning and learning resources centers. Modularization of training is happening and employees are enabled to plan time for learning individually and to create their own learning route.

Learning and development are considered to be more important than training nowadays (n = 9). Buzzwords in this respect are learning on the job, integrating work and learning, continuing professional development, continuous employee development, informal learning, and reflective practice. The view that training courses are not the solution to every problem is widely held by these participants.

Five participants hold counteracting viewpoints. They either disapprove of government promoted 'Investors in People' or 'National Vocational Qualification (NVQ)' type programs, or they do not believe that the training department now has more credibility than before, or they do not see any tendency at all towards self-directed learning in the organizations they work with. These results appear in Table 2.

Table 2
Tendencies in HRD

Tendencies	n
Standardization	17
Training outside the training department	12
Strategic training	12
Liberalization	10
Learning and development rather than training	9
(De)centralization of training	8
Counteracting ideas	5

Learning Activities

Group learning is a powerful learning activity in 11 participants' organizations. This encompasses various group learning activities, group experiments, active development sessions, learning support groups, and case-based collaborative learning, amongst others.

Nine participants report the deliberate use of existing possibilities for work-focused learning activities. Recognizing and using available learning resources and opportunities are one side of the coin, while problem solving at work forms the other side. The use of new media in HRD programs is still on the rise (n=7). Intranet, computer-based training, multimedia, email, and the Internet are all used to support other learning activities.

Six participants focus attention on learning from others as an important learning activity, including the use of mentoring, systematic induction, and supervisory coaching. Only three participants point to the possibility of changing (e.g., diversifying) the work to fit with employee competencies rather than the other way around. These results are described in Table 3.

Table 3
Learning Activities

Learning activities	n
Group learning	11
Use existing work-focused learning possibilities	9
Use new media	7
Learning from others	6
Change work	3

HRD Roles

No less than 14 participants report that the promotion of individual development is at the core of their work as a training consultant. Personal development remains an important field of activity, just as individual counseling, development planning, individual learning facilitation, and individual guidance. A second core domain is organizational consultancy (n = 11), encompassing internal consultancy, organizational change, and process counseling. Third, training delivery is still highly characteristic in ten cases.

Organizational analysis is reported by seven participants as an important role. This consists of competency analysis, training needs analysis, job analysis, and monitoring progress during change processes. Six participants mention the recognition of learning by the workforce as part of their role, meaning they try to raise people's awareness of learning that is taking place informally and explicitly identify the new knowledge and skills gained. Six participants have also a responsibility for financial matters (e.g., training budget issues). These results are summarized in Table 4.

Table 4
HRD Roles

HRD roles	n
Individual development	14
Organizational consultancy	11
Training delivery	10
Organizational analysis	7
Recognition of learning	6
Financial matters	6

Problems and Barriers

Two main categories of problems and barriers experienced by the participants emerge from the interviews. First, 10 participants report resistance to change in trainers and, especially, in managers. Managers resent being made responsible for training issues that were formerly dealt with by trainers. Some trainers resist taking on a more facilitative consultant-like role. Second, eight participants experience a lack of recognition for training issues in organizations. They refer to the lack of a training culture and to the fact that despite a thriving training rhetoric not enough money is spent on good training. Sometimes managers are perceived as ignorant about training issues, resulting in a lack of training policy. Both training needs assessment and training evaluation are sometimes considered to be missing from standard operations. These results are described in Table 5.

Table 5
Problems and Barriers

Problems & barriers	n
Resistance	10
Lack of recognition for training issues	8

HRD Strategies

The strategies used by training consultants to deal with the problems and barriers they are facing can be summarized under three headings. First, 13 participants are actively trying to develop the learning climate of organizations. For instance, they attempt to create an empowering climate throughout the company, they encourage learning at all levels and in all places, they develop learning programs incrementally rather than by blueprint, or they try to get employees to recognize the learning opportunities that are available in everyday work situations. Second, 10 participants highlight the importance of negotiating with the various stakeholders involved in HRD processes, especially with managers. An important strategy in this connection is to influence the definition of an assignment or a forthcoming project at an early stage. Participants tend to stress the group's rather than simply their own responsibility for certain learning processes. Sometimes they take to educating the management rather than the operatives perceived to be 'the problem' initially. Third, participants undertake certain activities which will make them more professional consultants (n = 8). They work with associates, they are actively developing their consultancy skills, and they market both themselves as consultants and the products they have developed. These results appear in Table 6.

Table 6
HRD Strategies

HRD strategies	n
Develop learning climate	13
Negotiate with stakeholders	10
Be a professional consultant	8

Conclusions and Limitations

The first research question focused on the changes that are occurring in the way work-related learning is organized. In a context of decreasing budgets, training is found to be increasingly taking place outside a training department. The tendency towards liberalization reflects this observation, in that individual employees and their managers are increasingly held responsible for organizing individual development and team learning. On the other hand, training is also said to have become more strategic and, especially, more standardized. Viewed from the learning-network perspective, this is a counteracting tendency towards a vertical network. Apparently, some organizations are moving in the vertical direction, whereas others are heading for a more liberal learning network. Incidentally, this notion is mirrored in the finding that some organizations are centralizing their training efforts, while others are in a process of decentralization.

The second research question investigated the roles that training consultants play in 'new' ways of organizing learning. Again, the evidence is inconclusive. On the one hand, the prevalence of organizational consultancy and group learning activities points to a more horizontal learning network, whereas the emphasis placed on individual development and training delivery suggests a more liberal-vertical orientation. HRD roles in some organizations are clearly different from those in other organizations.

The third research question was about the problems and barriers that training consultants perceive in 'new' ways of organizing learning. Interestingly, although the strategic contribution of training was strongly emphasized before, the problems of resistance and lack of recognition tell a somewhat different story. Apparently, not all stakeholders have the same viewpoint about the preferred place and function of HRD efforts, which may account for

the fact that no general patterns were discerned in answering the first two research questions. This lack of agreement is probably why the current strategies of training consultants to deal with the problems and barriers they are facing include improvement of the learning climate and frequent negotiation with key stakeholders. These strategies seem well suited to involve stakeholders in HRD processes.

A first conclusion, then, is that few general tendencies across all types of organizations can be discerned from this sample. The strongest visible trend is the one towards standardization, which is pointing to verticalization rather than to more liberal learning arrangements.

A second conclusion is that organizational consultancy is as prevalent a role as training delivery, both of which are over-shadowed, however, by a focus on facilitating individual development. There is a strong awareness among training consultants of the importance of learning and development beyond formal training. In the actual programs that are run, however, informal learning and learning from daily work experiences are relatively under-addressed issues.

A third conclusion is the absolute invisibility of external learning networks, that is, the lack of recognition for employees learning within their professions. Training consultants do not pay enough attention to the fact that employees may wish to develop professional competencies that enable them to work in different organizations.

A fourth conclusion refers to the frequently made claim that training is now more closely linked to the business strategy and more highly regarded within the organization. At least three amendments should be made here:

- Most self-employed trainers and external consultants raise serious doubts about the ability and willingness of organizations to measure such impact at all.
- Internal consultants and HRD managers themselves report serious difficulties in getting line managers to take on responsibility for training issues, which should be part and parcel of a more strategic approach to training.
- Many internal consultants work mainly with senior and top managers. The fact that managers at that level are satisfied with the beneficial initiatives of internal consultants is no guarantee per se that changes are actually taking place at lower management levels or on the shop floor (especially if people are reluctant to take on responsibility for training issues).

So, although HRD is seen as becoming more strategic to the organization, several issues require this observation to be the object of further investigation. First, data were collected from training consultants only. Interviews with managers and employees should be held to check for different interpretations. Second, these conclusions are based on a small, select sample of practitioners with a specific background (having completed a University of Sheffield distance learning MEd) in one specific country (the UK). Interviews should be conducted with training consultants from other universities and in other countries to check for specificity. Third, the analysis so far has focused only on the general changes perceived to be taking place in organizations. Further analysis needs to be conducted to find out if specific changes apply to small and medium-sized enterprises as opposed to larger organizations, and to the role of internal as opposed to external consultants.

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Using Study Circles in the Workplace as an Educational Method of Facilitating Readjustment After a Traumatic Life Experience

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While employees who have undergone a traumatic life experience (TLE) are often referred for counseling and therapy, most organizations do not prepare managers and co-workers for the unique issues posed by TLE employees when they first return to the workplace. The Study Circle, a "democratic" interactive adult learning format, is introduced to make up for this lack by educating managers and co-workers about the various stages in the trauma recovery process and how to facilitate TLE employee's re-entry to the workplace.

Keywords: Workplace, Trauma, Study Circles

Employees who have had a traumatic life experience (TLE) and are returning to the workplace face a difficult road to recovery. The workplace environment as it exists today is not well equipped to handle such individuals. Managers and co-workers lack knowledge of a recovery framework to facilitate and support the survivor-employee's re-entry. The term TLE (traumatic life experience) was coined by the researcher/author after having witnessed and observed people trying to cope and deal with a traumatic event in their lives, especially those individuals returning to the workplace. Such TLE's include a rape, a hold-up, a heart attack, witnessing a murder, the suicide of a loved one, a divorce, and the loss of a career, etc.

Statement of the Problem

Today the workplace manager needs assistance and knowledge in recognizing and understanding the traumatic life experience (TLE) person. Many questions for managers arise such as: What do you do when a traumatized person returns to the workplace and does not want to do his/her work? What do you say to such a person to obtain the status on their work assignments? How do you allow the traumatized person to go through a process of grief and mourning following the trauma?

Three components in the workplace environment that affect individuals who are returning to work after experiencing a trauma are: (1) organizational dilemma, (2) the manager's resistance and (3) survivor's apprehension. In a pilot project related to this study (1993), the author uncovered a wide range of responses on these three components from interviews conducted with managers, survivors and therapists on the subject of employees who re-entered the workplace after having experienced a trauma.

Organizational Dilemma

With the rise in violent incidents in organizations, more knowledge is required in organizations about the recovery process of traumatized employees and how to educate supervisors and managers to work with them. Mantell (1994) has written about how to look for and report warning signs of potential outbursts of employees in the workplace; however, there is little guidance available on how managers should deal with such an employee in general.

Manager's Resistance

Today's managers are already overwhelmed with organizational setbacks dealing with the loss of resources, such as when budgets are slashed, divisions are deleted, responsibilities are added and productivity goals are doubled and tripled. These are the squeaky wheels which get the attention of managers, who must then prioritize their time and staff. In this highly stressful environment, a returning TLE may not get the attention that he/she should receive upon re-entry to the workplace.

Survivor's Apprehension

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Survivors who return to the workplace after having experienced a trauma are not given the attention they require to readapt to their work environment. The author's study (1993) revealed that when survivors returned to the workplace, they received little or no support from the organization, and their managers did not know what to say to them. None were aware of the stages of recovery for a traumatized person to return to normal functioning. They felt they wanted to talk about their trauma, and had difficulty readjusting to the workplace environment.

Theoretical Framework

The research addressed the development of a cost-free short-term adult educational intervention called Study Circles to assist both managers and co-workers in understanding the dynamics of recovery for individuals after a traumatic life experience (TLE). Herman's (1992) three stages of recovery process is used as a model for the Study Circle intervention: (1) Establishing a safety net, (2) telling the trauma story, and (3) reconnecting the individual to the work community. As an educational intervention, the Study Circle is designed to complement any individual or group psychotherapeutic intervention for TLE survivors themselves. The researcher selected the Study Circle method of intervention because it is an adult learning technique that allows managers and employees to come together to share their views on a specific topic (Oliver, 1987). Study Circles promote both group interaction and collective sharing of ideas and information among participants. In a Study Circle, all individual views are considered, and participants have an opportunity to listen, dialogue and disagree (Stubblefield, 1994).

Pre-Study Circle interviews served as an overview of the scope and purpose of the research, and the introduction of themes provided background to better familiarize the potential participants with each theme and its significance in the recovery process. The interview themes, identified through Herman's (1992) three stages of recovery, were (1) establishing a safety net, (2) telling the trauma story and (3) reconnecting the individual back to the work community. These themes served as an introduction to the managers and employees who participated in the Study Circles.

Study Circle participants were selected from referrals. From among these, the researcher chose individuals based upon an employee's and the manager's interest and whether they were willing to "sign on" for the research by making a personal commitment of time and energy. The researcher was able to determine whether participants had a familiarity with this type of problem. Four Study Circle participant categories emerged: (1) senior level managers who did not have a traumatic life experience nor supervised a TLE employee; (2) senior level managers who had a traumatic life experience and had supervised a TLE employee; (3) senior level managers who did not have a traumatic life experience but had supervised a TLE employee; and (4) TLE employees who had made a successful re-entry to their workplace environment.

In the traditional workplace the three most common educational formats are the lecture, the seminar and the workshop. The lecture is best for communicating and clarifying information, procedures, policies, regulations and the like. It is also used by executives to stir and motivate employees. The seminar format is most often used by corporate leadership to explore and formulate new ideas, policies, procedures--to debate and discuss them before implementing them. The workshop used primarily for training people in various skills, is a very practical performance-based educational model.

What is missing in the workplace is an educational process for dealing with topics that need to be learned attitudinally, that is, topics that are aimed at transforming not only knowledge and behavior but also attitudes and emotions. In a topic such as dealing with the re-entry of a TLE employee, it is not enough to present the kinds of knowledge and information given in a lecture, nor is it enough to include a set of behavioral skills that one might learn in a workshop. The "missing" educational format needs also to provide ways to educate attitudes and emotions as well. By its educational design, the Study Circle provides this missing dimension of the traditional learning process in the workplace. The personal sharing in the Study Circle by participants who had experienced a traumatic life event or had managed a returning TLE employee provided the context for the needed attitudinal and emotional learning to take place.

The Study Circle is a distinct form of education which emerged in the United States in 1878 as one element of the Chautauqua Movement which included home-based Study Circles (Stubblefield, 1994). The idea of Study Circles transferred to Sweden during the 19th Century when that country was going through a very bleak period. Today Study Circles are a central part of Swedish life (Schurr, 1988). The Study Circle Resource Center (SCRC) in Pomfret, Connecticut is a clearinghouse of information of Study Circle activities all over the country. The SCRC is dedicated to the revitalization of the "democratic spirit."

Stubblefield (1994) believes, "Study Circles offer a new format for engaging learners in study and discussing public issues." Built on the experience and knowledge of the group members, it expands horizons by ensuring that everyone's views are considered during the discussion (Oliver, 1987). When properly conducted, a Study Circle makes all participants equal and values everyone's contribution. This democratic spirit in the TLE Study Circle reported herein allowed managers and employees to share their experiences and discuss the topic as equals. A rather revolutionary event in most organizations!

Research Questions

The research considered these questions:

1. Can Study Circles be designed and used to engage managers in a discussion of the problems of returning TLEs?
2. Can Study Circles be designed for and used by managers and co-workers to facilitate the TLE re-entry?
3. Does a manager having pervious experience with a TLE in the workplace engage more easily and intensively in a dialogue with a TLE than managers without such experience?
4. What examples of group-participation dynamics are likely to occur during such a Study Circle?
5. How open are managers after a Study Circle to dialogue with a TLE in the workplace?
6. Does the environment and setting of a government agency have relevance for Study Circles in assisting managers to help returning TLEs?

Methodology

The research was qualitative by design. The authenticity of data was verified by the multiple sources of information that were used. These sources included the long interview, case studies, researcher's observations, audiotaped interviews and videography.

The multiple sources of information were verfied by: (a) interviewing the participants prior to the Study Circles Sessions, (the interview information the researcher received and captured on audiotape provided a cross check with other people in the group). (b) The participants in the Study Circle had an opportunity to comment to each other, providing subject feedback verification, and (c) video taping was completed with all three Study Circles Sessions. Not only was the data verified, but the researcher's interpretations were verified by going through a debriefing with advisors which, through this debriefing, defended the data. Alternate interpretations were rejected in the review.

Leedy (1993) writes, "The qualitative research methodology approach is concerned with human beings: interpersonal relationships, personal values, meanings, beliefs, thoughts and feelings. The researcher attempts to attain rich, real and valid data and from a rational standpoint, the approach is inductive."

The long interview was used during the research study. McCracken (1988) writes, "The long interview gives us the opportunity to step into the mind of another person to see and experience the world as they do themselves."

The suggestions of Stake (1995) guided the researcher's audiotaping in the two case studies that were presented in the research: an employee who returned to the workplace after having experienced a trauma and a manager who had never supervised an individual with a trauma. The storytelling approach as described by Stake created both a chronological and biographical development of each case. Also, the findings of Robert K. Yin (1994) guided the researcher in the pilot case study.

The qualitative interviewing approach of Rubin and Rubin (1995) was used in data analysis and in viewing the videography. Analyzing participants words and nonverbal communication during a review of the video tapes assisted the researcher in discovering themes and clarifying perceptions of the participants.

The research clearly showed that Study Circles can and do work successfully as an educational format in a culturally diverse workplace especially a government agency. Two groups of Study Circles (Group A and Group B), with all sessions conducted during the lunch hour, attracted both managers and employees. The lunch hour served as an excellent time for meeting since it did not interrupt the work schedule of the participants.

Each Study Circle program consisted of three sessions where participants, managers and returning TLEs, engaged in open dialogue and discussed questions pertaining to that session's theme. The three themes were: (1)

creating a safety net, (2) *telling the trauma story*, and (3) *reconnecting the employee to the workplace*. Each session provided insights to the participants on the issues and concerns managers may have in welcoming a returning TLE to the workplace. For example, in the "safety net" session conflicting views were acknowledged by managers who wanted to emphasize the need for "productivity and compassion" when the TLE employee returns to the workplace. Managers, primarily responsible for the "bottom line" and getting the work done, felt conflicted if they had to spend a lot of time tending to a TLE--and at the same time not being sensitive to the needs of the returning TLE.

In the second session the discussion focused on how managers should interact with returning TLE's when they wanted to tell their trauma story. All managers agreed that good listening skills were required in order to determine whether or not the returning TLE wanted to talk about his trauma. All managers agreed to "acknowledge" the TLE employee and "treat the person as they wanted to be treated." In the third session, "reconnecting" managers focused on how to explain the recovery process to co-workers and what tone to set in the organization when the TLE returns to the workplace. One manager suggested that the returning TLE be invited to staff meetings and be reassured that his status had not changed because of the trauma.

During all of the Study Circles sessions TLE survivors provided feedback to managers and employees on the expectations they had of managers and the organization. These sessions provided an opportunity to explore uncharted territory in the organization, that of bringing a sensitive topic to the workplace and openly talking about its effect on management and its employees.

Each Study Circle group displayed a different spirit. Group A was homogeneous and shared more feelings and suggested that the organization needed "guidelines to assist managers" in their task. On the other hand, Group B managers remained more abstract and intellectual in their contributions to the group; they did not share their stories or experiences with the group, but more generally encouraged the organization to train its managers to "communicate" better and learn "active listening skills." Although Group B managers were not as open as Group A managers, the employees in both groups were equally open and eager to share their stories with other participants.

Both groups created their own group culture, engaging not only in the sessions's topic but other pertinent issues relative to manager/employee concerns such as acknowledging differences (each TLE will be different), communicating more openly, and recognizing performance issues when the TLE returns to the workplace.

It was concluded that to appropriately welcome a returning TLE employee, managers did not need to have previous experience in dealing with a returning TLE. Their success depended on their individual and career experience, how comfortable they felt in engaging the returning TLE, and their own personal experience with trauma.

The intervention techniques available in today's organizations to returning TLEs are many and varied and their relative applicability and effectiveness will depend on a number of factors,e.g., the traumatic event which was experienced, the level of medical and psychological therapy the TLE employee has had following the traumatic life event and before returning to work, and the help the TLE employee has sought and received outside the workplace from groups, family members, friends and associates.

In addition to psychological counseling and individual psychotherapy for the TLE employee, for example, Corey and Corey (1997) introduced the "Therapy Group." Here individuals meet on an ongoing basis with a counselor to discuss their grief. Yalom (1995) has observed in working with his clients that between the third and sixth month of group therapy individuals often undergo a shift, noting "Their initial goal, relief of suffering, is modified and eventually replaced by new goals, usually interpersonal in nature." Corey and Corey observe "Groups provide a natural laboratory that demonstrate to people that they are not alone and that there is hope for creating a different life. Grief intervention or grief counseling is another short term approach which can be used by a counselor or therapist to smooth a re-entry transition to traumatized employees returning to work. Ward (1995) concludes that "Grief needs time and space to express itself; one needs to give oneself the time, security and permission to grieve."

The educational intervention that the researcher introduced--Study Circles--does not replace importance of the TLE employee seeking one-on-one counseling or group therapy. The Study Circle intervention is designed for the managers and co-workers of the TLE employee. Its educational objective focuses on preparing the managers of an organization to deal effectively with individuals who are returning after a trauma. It does not exclude a manager in their organization from recommending to his/her employee to seek the services of the Employee Assistance Program (EAP) which may in turn recommend that the returning TLE seek personal counseling. In fact, after the Study Circle, a manager may be better prepared to make such a recommendation more selectively and compassionately. In this study the researcher is offering Study Circles as a forum which can assist managers in creating a safe bridge and a caring atmosphere where co-workers along with managers can listen to returning TLE employees and learn to be proactive instead of reactive.

Although in its long history the Study Circle format has been used extensively in community meetings, church groups and home study groups, it has only rarely been tried in workplace settings. These Study Circles

sessions proved that this adult educational process can be effectively applied in business and corporate settings (Osborne & Shevat, 1982).

Results, Conclusions and Limitations

The researcher conducted two groups of Study Circles, Group A and Group B. Both groups were a mix of managers and employees. Group A consisted of managers and employees with no specific professional or interpersonal skill base, they were selected only by availability and referral. Their "chemistry" was excellent; they were the ideal Study Circle. The group got along exceptionally well and freely shared their experiences with each other. Their sessions were filled with light humor, and no one seemed to up-stage another participant. On the other hand, certain Group B managerial participants were selected because of their professional expertise (alternative resolution dispute experts, lawyers, labor-relations, workshop leaders and a human resource manager). Group B as a whole did not generate great "chemistry" with each other. The managers, except for a few, did not share their trauma experiences with the group members. Instead they tended to make professional recommendations.

The researcher believes this occurred because Group A's orientation was toward finding a solution to a problem. Group A was more concerned with getting a result and giving guidance on how a job could be done better. On the other hand, Group B participants were swayed and perhaps awed by the experts in the session, who seemed most concerned about teaching communicating and listening skills, not with solutions. Over and over again, the professional communicators pointed out how the managers needed to be trained and skilled in good communication and active listening skills to support returning TLE employees, but as a representative of their work, they did not "walk their talk."

It would be important in future Study Circles groups for the facilitator to be aware that the types of individuals recruited for the sessions will make a difference in the quality and tone of the Study Circle sessions. For example, if all participants are engineers, because of their technical expertise their views on approaching a returning TLE are likely to be different from individuals who are counselors or group-process oriented.

However, every participant in both groups reported that the educational goals of the Study Circle were accomplished. Thus, despite the lack of group "chemistry," the Study Circle achieved its educational effect.

Administrative Observations

Distributing a list of discussion questions prior to each Study Circle sessions worked successfully. Participants said the handouts got them thinking about the content before the sessions, and gave them ideas, topics and verbiage to engage in a dialogue about a sensitive subject. Group A and B participants repeatedly made reference to the fact that they had reviewed the questions and noted in the sessions that some of the topics would be essential for mangers to focus on when greeting a returning TLE. For example, "good listening skills" was highlighted on one handout and managers and employees had extensive discussion on this topic.

The pre-Study Circle interviews were universally seen as helpful by participants. Numerous benefits about these interviews were mentioned by the participants both on the evaluations and in informal conversations. However, in Group B none of the employees were interviewed beforehand, yet all of them were very involved in the Study Circle, freely sharing their trauma stories, each reported having had a successful educational experience. Thus, it seems that pre-Study Circle interviews are not a critical factor in the learning process. Although the researcher concludes that pre-Study Circle interviews are not necessary to conduct a successful Study Circle, all those who were interviewed stated that the interviews assisted them in getting a broader framework for the topic.

How This Research Contributes to New Knowledge in HRD

This research project contributed significantly to a HRD program by illustrating how the Study Circle as an adult educational format can be transported into the workplace, in this case to assist managers and co-workers in dealing with a returning TLE employee. Through this Study Circle certain human resource problems can be minimized or prevented. Without this education, lack of communication can lead to performance problems on the job. For example, a supervisor who does not know how to approach a returning TLE may give the employee an adverse rating for not performing his functional duties. On the other hand, if the TLE employee is not treated with sensitivity or with compassion, he/she may file a grievance or a discrimination complaint against the manager.

Study Circles provide a model and a method to educate people about sensitive topics, which can be very easily adapted for any type of workplace setting. This "democratic" educational model brought together for the first time both managers and employees who were asked to teach and learn from each other through the Study Circle process about the very sensitive topic of traumatic life experiences.

During the Study Circle sessions participants listened to each person's contribution and offered their own stories and experiences. Some of the participants were willing to risk sharing their personal stories of trauma, which created a very positive learning environment. Because of the personal cohesion and trust that was built up among participants, they learned much, theoretically and practically. In their evaluatory reports, managers and employees said they better understood the process of recovery from trauma and were confidently able to implement some of the strategies and suggestions discussed in the Study Circle sessions. Although in the workplace, there is normally a sense of "difference" between employees and their managers, the interactive dynamics of the Study Circle process proved to be a gentle "equalizer, "enabling a free and respectful exchange among all participants.

Study Circle groups may have tremendous variation in their "group personality," but the Study Circle process, if handled properly, can work successfully within such variation. Even though the researcher was disappointed in the quality of Group B's trust and interaction, it was clear that for a Study Circle to be successful the facilitator does not have to be in control of the participants' relations and behavior. The evaluation forms completed by the participants assured the researcher that both groups had achieved their educational objectives quite successfully.

Whereas the task of helping the successful re-entry of a TLE employee would normally fall to a counselor or therapist, the Study Circle format allowed participants not to assume the work of the therapist, but to support and promote it in ways appropriate to managers and co-workers. This work of support and promotion could not have been produced in a traditional lecture or workshop, but only in a learning format where personal experience and empathy along with the expression of attitude, emotions and values are provided. The Study Circle format puts these experiential and emotional factors at the center of its learning process.

The Study Circle as an educational format can also prove useful with a topic around organizational policies and procedures that have not yet been formulated and institutionalized. Treatment of the returning TLE employee by managers and co-workers is one such focus. Because such treatment requires a major involvement with empathy, attitude and other emotional sensitivity, it is not an appropriate topic for legislation by executives in seminar, none of whom may have had direct experience of returning to the workplace after a traumatic life experience. The Study Circle format invites participants to share their personal views around such topics, and it views this personal experience as important data in helping shape procedures and policies.

In summary, the researcher sees the Study Circle process as an adult learning format that can fill a missing dimension among the educational tools currently used in the organizational workplace.

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Learning-activities of Junior Managers: Findings of a Quantitative Pilot-study

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In this pilot-study learning-activities of junior managers are addressed. The purpose of the study is to describe how management-tasks are learned and to what extent. Therefore, we developed a categorization of learning-activities. It is assumed that managers generally learn by doing. Additionally, we address the relation between extent of used learning-activities and age. The assumption is that regardless the age, informal learning-activities are used more than formal learning-activities and with the rising of age, less (formal) learning-activities are used.

Keywords: Management Development, Learning Activities

As a consequence of changes in the environment of organizations, functions and tasks of organization-members may change, for example as a consequence of getting a promotion into a management-position. Often it is not clear whether people are still able to function effectively under changed circumstances. Usually, one will try to bridge the gap between the desired competencies and the actual competencies by using learning-activities. Acquiring insight into types and extent of used learning-activities is one of the central assignments for researchers in the field of Human Resource Development (HRD).

In the last decade, the Human Resource Management approach emphasized the critical role of managers. Storey (1996) states that line managers need to be closely involved both as deliverers and drivers of the HR-policies. Furthermore, because of ongoing decentralisation- and flattening-processes, tasks and responsibilities are shifted towards lower levels of management. Earlier, those tasks were done by personnel specialists alone. This includes the responsibility for the development of employees as well as the manager's own development. Consequently, (first-line) managers are at the same time object and subject of Human Resource Development (Thijssen, 1998). Moreover, first-line managers lead independent business-units and are therefore held responsible for the results of their unit. Organizations, then, depend to a large extent on the competencies of their (first-line) managers. Consequently, it is an important issue to gain more insight into the learning of management-tasks. It is especially the group of junior managers that needs attention from the field, because they will normally use many learning-activities to prepare themselves for their new position.

A tendency in the field of HRD is the increasing focus on the workplace as an environment for learning and education. This can be seen as a result of the greater demands placed on productivity in which there is little time for training off-the-job. As a result, work and learning are becoming more and more interdependent. Furthermore, there are some advantages of learning on-the-job: the small transfer-problem, high motivation, early availability of new employees and low(er) costs (De Jong, 1996). In the same line of thought, fits the increasing attention for more informal ways of acquiring job-related competencies. However, the contribution of informal learning-activities of junior managers has not yet been extensively researched.

The objective of this pilot-study was to identify and to describe learning-activities of junior managers and the factors relating to the use of learning-activities. These factors can be individual or contextual; in this paper we describe the relation between age (individual factor) and use of learning-activities. The central research-question addressed here is: How can learning-activities used by junior managers, be characterized with regard to extent and type and how is the use of learning-activities related to age?

Theoretical Framework

Learning-Activities

Work-related learning-activities are various ways in which new qualifications are acquired or already existing knowledge and skills improved, both on-the-job and off-the-job.

Learning-activities vary in extent of formalization; they can be formal, non-formal or informal. Formal learning-activities are generally assumed to be goal-directed, organised and structured and to have educational intentions (Warmerdam, 1993, Marsick & Watkins, 1990). Marsick & Watkins (1990) add that formal learning is institutionally sponsored and classroom-based. Examples of formal learning-activities are courses and seminars.

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Informal learning is more difficult to define, but in general it is seen as acquiring and developing qualifications in and by executing normal work-tasks, within the normal work-situation. Informal learning usually happens unintended, unorganised and unstructured and is considered a side-effect of executing productive work-tasks (De Vries, 1988). Moreover, the control of informal learning-activities rests in the hands of the learner (Marsick & Watkins, 1990).

It is difficult to draw a precise line between formal and informal learning. Learning-activities that fulfil certain, but not all conditions are therefore called non-formal. Examples are activities like coaching or using job-aids, which are both partially structured.

Researchers in the field acknowledge that although the positive effects of formal training must not be forgotten, this is certainly not the only effective way for personnel development. Informal learning-activities seem to have possible effects on productivity, which are considered to be high, even in comparison with the value added due to formal learning (Van Onna, 1992). Additionally, researchers found that managers value formal training, but mainly learn by doing (Hill, 1992), or as McCall et al (1988) call it: learn from experience. Similarly, Noe & Wilk (1993) concluded that on-the-job experience may be more valuable for skill and competency development than formal courses or seminars. In addition, managers are generally viewed as being 'accommodators'; they prefer to learn from concrete experience and active experimentation (Kolb, 1984). From this point of view we formulated the hypothesis (A) that managers' learning-activities will mainly be informal (learning by doing). Taken together, it seems worth it to take a closer look at the informal learning-activities of junior managers, while at the same time not neglecting the value of formal training.

Warmerdam and Van de Berg (1993) identified 14 learning-activities. Kwakman (1992) carried out a factor-analysis on the same set of activities, which resulted in three factors: discovery learning, coached learning and external learning. On the basis of these findings, we developed our own categorisation of learning-activities in the following four categories:

1. learning by doing: on-the-job, informal;
2. learning with/by co-workers: on-the-job, non-formal;
3. Learning by seeking information: on-the-job, non-formal;
4. Training, workshops, courses, etc.: off-the-job, formal.

From results of reliability-analyses and factor-analyses, it was concluded that this categorisation is justified.

First-Supervisory Experiences

This research focuses on junior managers. Junior managers are managers working in (one of) their first supervisory position and having little experience. Mostly this concerns a first-line management-position in which a manager directly leads the workfloor. Important to note is that the term 'junior' refers to the extent to which a manager has experience in supervisory positions, it does not refer to age. Although age and experience will often be related.

The importance of the first-supervisory experience for further development as a leader, was supported by several studies. Davies & Easterby-Smith (1984), for example, found that confrontation with novelty in a job, e.g. when getting one's first supervisory position, is a common feature of developmental experiences mentioned by managers. In a study done by McCall et al (1988), it was concluded that topmanagers see their first supervisory position as a key-event in their career. Many executives maintained that, it was their first managerial job by which they were introduced to organizational realities. In this period managers are most likely to be open for new experiences and for learning fundamental aspects of the organization's methods. In support of this finding, Finch & Hopkins (1997) found that effective leaders considered new positions that offer new and/or increased responsibilities as most helpful to their development as leaders. Finally, Hill (1992) concluded that the first management position has a remaining influence on the further development in leading positions. Taken together, these investigations indicate that the first managerial position is a relevant starting point for researching managers' learning-behaviour.

The Management-job

A review of literature on management results in a long and varied list of definitions and descriptions of management and corresponding behaviors, activities, tasks, functions and responsibilities. The early descriptions refer to what managers should do (prescription), whereas more recent studies show what managers actually do (description) (Vinkenburg, 1997). For the pilot-study we chose for a description of the management function of the latter kind, developed by Luthans et al. (1984, 1985, 1988, 1995). They distinguish between twelve concrete

managerial activities with behavioral descriptors. These managerial activities, which we will indicate as management-tasks, were grouped into four clusters: (1) Communication (Exchanging routine information, Processing paperwork), (2) Traditional Management (Planning and co-ordinating, Decision making and problem solving, Monitoring and controlling performance), (3) Networking (Interacting with others/outsiders and Socializing, Politicking) and (4) Human Resource Management (Motivating and reinforcing, Disciplining and punishing, Managing conflict, Staffing, Training and developing).

Certain characteristics of management-tasks are likely to relate to the use of learning-activities. In this research we measured the importance and frequency of management-tasks. It is assumed that some tasks are more applicable and important for lower levels of management than others. Our hypothesis (B) is: the more important a management-task is and/or the more a management-task occurs, the more learning-activities will be used with regard to that management-task.

Learning-Activities and Age

One of the questions of the research-project as a whole, is which factors are related to the use of learning-activities in the current job. Since learning-activities are conceived of as depending on individual and contextual factors, we included from both factors some in our research. In this paper we address the relation between age as an aspect of personal characteristics and the use of learning activities.

Several authors stress that when age rises the total extent of use of learning-activities decreases. In other words: the older one gets, the less learning-activities (formal and informal) are used. An explanation that is often given, is that older people are not able and not willing to learn. Onstenk (1995) states that these kinds of explanations are mainly prejudices. The likelihood that learning processes will take place is not only a result of characteristics of the learner/employee, but also depends on the provision of learning opportunities in the workplace. Empirical research shows that often it is the lack of training-opportunities and the low accessibility of training for 'older' people that causes this negative correlation between age and participation in (formal) education. In addition, formal learning-activities are organized for people in the first half of their career. In later stages less attention is paid to formal training. Employees with more experience must find their own way in developing themselves. This mostly comes down to using informal learning-activities. In sum, age can be seen as a moderator-variable.

Although managers in this research cannot be called 'old', there is enough variance in age to study the relation between age and use of learning-activities. Finally, we expect that regardless the age, managers will use more informal than formal learning-activities, since managers are assumed to be pragmatic oriented learners and generally favour learning by doing.

With regard to the relation between age and use of learning-activities we formulated the following two hypotheses:

C. With the rising of age, the total extent of learning-activities used by junior managers decreases;
D. With the rising of age, junior managers participate less in formal learning-activities;

Research Questions and Hypotheses

Three research questions and four hypotheses are addressed:

1. How can learning-activities of junior managers be characterized? (by extent and type)
   Hypothesis A: The more informal a learning-activity is, the more junior managers use it.

2. How can management-tasks of junior managers be characterized by frequency, importance and use of learning-activities?
   Hypothesis B: The more important a management-task is and/or the more frequently a management-task occurs, the more learning-activities junior managers use for these management-tasks.

3. How does age relate to participation in learning-activities by junior managers?
   Hypothesis C: With the rising of age, the total extent of learning-activities used by junior managers decreases;
   Hypothesis D: With the rising of age, junior managers participate in fewer formal learning-activities;

Methodology

Participants

In this pilot-study 70 junior managers participated. Most of them were working in first-line management-jobs as leaders of teams or departments. They have a minimum of 6 months managerial experience, while the average managerial experience is 7 years and 2 months (SD = 5).

The pilot-study was conducted in two organizations: a large government institution and an international chain of fast-food restaurants.

Instruments

Questionnaire. A written questionnaire for the junior manager was developed. Topics were general background information, learning-activities in former job, learning-activities in first year current job (central part), management-tasks, competency and reflection. The respondents needed approximately one hour to fill out the questionnaire. The questionnaire was mainly conducted in groups, in presence of the researcher. Generally the answers were given on a five-points-scale (1 = low, 5 = high). An average score of lower than 2.5 is 'low', a score between 2.5 en 3.5 is 'moderate' and a score higher than 3.5 is 'high'.

Hand-out. In addition to the questionnaire a hand-out was developed with the four categories of learning-activities. The respondents needed this hand-out with examples to help them answering questions concerning their learning-behaviour during the first year in their current job.

Analysis

The main part of the questionnaire was analysed quantitatively, a small part qualitatively. For the quantitative data-analysis the computer program SPSS was used. This paper does not report on the qualitative results.

Results

Research Question 1. How can Learning-activities of Junior Managers be characterized (by extent and type)?

The extent of used learning-activities is given in Table 1. Junior managers score moderately on total extent of used learning-activities (3.02). Furthermore, we can see that the score on 'learning by doing' is high (3.77), while on all the other learning-activities junior managers have moderate scores.

Table 1
The Extent of Use of Different Types of Learning-Activities

Learning-activities	M	SD	F
1. Learning by doing	3.77	.84	27.35**
2. Learning with/by co-workers on-the-job	3.18	.77	
3. Learning by seeking information	2.64	.90	
4. Training, workshops, courses, etc.	2.57	.98	
Total	3.04	1.00	

** p< .01 (two-tailed)

Since we were interested in determining the ranking-order of types of learning-activities used by junior managers, we carried out an analysis of variance (Table 1). The results from this analysis show that the mean-scores of the first three types of learning-activities differ significantly (p<.01), whereas the third and the fourth learning-activity do not differ significantly. This leads us to the conclusion that junior managers learn more by doing than with/by co-workers, and more with/by co-workers than by seeking information and training, workshops, courses, etc. Table 2 shows the ranking-order of used types of learning-activities.

Table 2
Ranking-order of Extent of Types of Learning-activities Used by Junior Managers (1 = most used, 4 = least used)

Ranking	Type of learning-activity	
1	Learning by doing	(Informal)
2	Learning with/by co-workers	(Non-formal)
3	Learning by seeking information	(Non-formal)
3	Training, workshops, courses, etc.	(Formal)

From the data we conclude that informal learning-activities are most used by junior managers. This finding largely supports hypothesis A 'the more informal a learning-activity is, the more junior managers use it'. A slight restriction lies in the fact that there was no significant difference found between the extent of use of the third learning-activity (learning by seeking information) and the fourth learning-activity (training, workshops, courses, etc.). Obviously, the extent of used formal learning-activities does not differ from the extent of certain used non-formal learning-activities.

Research question 2. How can Management-tasks of Junior Managers be characterized by Frequency, Importance and Use of Learning-activities?

Table 3 shows the mean scores on use of type of learning-activity by clusters of management-tasks. The described general pattern of learning-activities (Table 2) is valid for Traditional Management-tasks and Networking-tasks. For tasks in the Communication- and HRM-cluster, the learning-activities 'learning by seeking information' and 'training, etc.' are turned round. Since we already concluded from Table 2 that the positions of these two types of learning-activities are interchangeable, this does not affect the initial conclusions. We conclude that for all clusters of management-tasks most informal learning-activities are used, followed by non-formal and formal learning-activities. Apparently, different management-tasks are learnt in similar ways.

The most right column with mean-scores in Table 3 provides information about the total average extent of used learning-activities for the different clusters of management-tasks. It seems that junior managers use most learning-activities for Traditional Management-tasks and least for Networking-tasks. The analysis of variance shows no significant differences between cluster 1, 2 en 4. Cluster 3 'Networking', however, differs significantly from the others with regard to the extent of used learning-activities. Whereas for the clusters 'Communication', 'Traditional Management' and 'Human Resource Management' is learnt moderately, for the cluster 'networking' junior managers use less learning-activities (the score is exactly at the point of being low: 2.51).

The frequency and importance of management-tasks are presented in Table 4. As can be seen, the total average frequency (3.58) and importance (4.02) is judged to be high. When we take a closer look at the four clusters of management-tasks, we see that tasks in the Communication and Traditional Management cluster have high scores on frequency. Tasks in the HRM- and the Networking-cluster occur moderately. The importance of all clusters is judged to be high, except Networking, which seems to be moderately important. Additionally, managers do not agree largely on the importance of the Networking-cluster (SD = 1.26). This finding may indicate that networking-activities are not especially meant for lower levels of management and are therefore found to be less important.

Table 3
Extent of Used Types of Learning-Activities by Different Clusters of Management-Tasks

	Types of learning-activities										
	Learning by doing		Learning with/by co-workers		Learning by seeking information		Training, workshops, courses, etc.		Total		
	M	SD	M	SD	M	SD	M	SD	M	SD	F
Clusters of management-tasks											
1. Communication	4.03	.98	3.31	.93	2.67	1.05	2.71	1.21	3.18	.64	15.83**
2. Traditional Management	3.87	.99	3.43	1.03	2.93	1.20	2.84	1.37	3.27	.74	
3. Networking	3.29	1.35	2.59	1.18	2.16	1.14	1.91	1.04	2.51	.84	
4. Human Resource Management	3.79	.90	3.30	.91	2.83	1.07	2.89	1.12	3.19	.71	

** p<.01 (two-tailed)

Table 4
Characterization of Clusters of Management-Tasks by Frequency and Importance

	Characterization of management-tasks			
	Frequency		Importance	
Clusters of management-tasks	M	SD	M	SD
1. Communication	3.89	.73	4.06	.73
2. Traditional management	4.07	.76	4.40	.58
3. Networking	3.01	.78	3.36	1.26
4. Human Resource Management	3.37	.61	4.29	.56
Total	3.58	.83	4.02	.92

Table 5 illustrates the ranking-order of management-tasks by frequency and importance. It seems that traditional management-tasks and communication-tasks occur more frequently than HRM- and Networking-tasks. With regard to importance it seems that tasks in the first three clusters are found to be more important than tasks in the networking-cluster. In the last column it is shown that junior managers direct less learning-activities to networking-activities than to the other clusters of management-tasks.

Table 5
Ranking-order of Clusters of Management-Tasks by Importance and Frequency and Extent of Used Learning-Activities (1 = most used, 4 = least used)

Ranking	*Frequency*	*Ranking*	*Importance*	*Ranking*	*Extent of used learning-activities*
1	Traditional Management	1	Traditional Management	1	Traditional Management
1	Communication	1	HRM	1	Communication
3	HRM	1	Communication	1	HRM
3	Networking	4	Networking	4	Networking

Now we know the frequency and importance of management-tasks and which learning-activities are used most. it is interesting to see whether a relation exists between frequency and importance of management-tasks on the one hand, and on the other hand the extent of used learning-activities. For the least occurring and least important cluster of management-tasks 'Networking', junior managers use least learning-activities. This finding seems to point at a relation between frequency and importance and extent of used learning-activities.

To further study the relation between frequency and importance of management-tasks and use of learning-activities, we calculated correlation-coefficients. From Table 6 it appears that frequency and importance of management-tasks are strongly correlated (.722). This can be explained by the high degree of freedom managers generally have. The autonomy in their jobs gives them a free choice to spend their time on tasks that they consider important.

A more interesting finding is that for both importance and frequency of management-tasks indeed a positive correlation exists with the extent of used learning-activities: the more important a management-task is and/or the more a management-task is encountered, the more learning-activities are used. Especially the frequency of management-tasks correlates strongly with extent of used learning-activities (.562). This can be explained by the fact that, in general, managers mention to learn by doing. Prerequisite for learning, then, is for management-tasks to occur. This conclusion is in support of hypothesis B ' the more important a management-task is and/or the more frequently a management-task occurs, the more learning-activities junior managers use with regard to these management-tasks'.

Table 6
Correlation Between Frequency and Importance of Clusters of Management-Tasks and Extent of Used Learning-Activities

Clusters of management-tasks	Importance by frequency	*Importance* by extent of used learning-activities	*Frequency* by extent of used learning-activities
1. Communication	.354**	.318**	.061
2. Traditional Management	.760**	.314**	.507**
3. Networking	.629**	.412**	.247*
4. HRM	.559**	.443**	.595**
Total	.722**	.458**	.562**

** p<.01 (one-tailed); *p<.05 (one-tailed)

Research question 3. How does Age relate to Participation in Learning-activities by Junior Managers?

In order to give an answer to the third research-question, we calculated a bivariate correlation (one-tailed) between age and total extent of used learning-activities. The correlation is -.254* (N = 64, p. 021). Although this score does not show a strong relation, still it is significant. It means that when the age rises, managers use less learning-activities. The third hypothesis 'with the rising of age, the total extent of used learning-activities decreases', hereby is confirmed.

The fourth hypothesis 'with the rising of age, managers use relatively less *formal* learning-activities will be used', was tested by calculating a bivariate correlation (one-tailed) between age and total extent of used *formal* learning-activities. The correlation is: -.059 (N = 67, p = .318). This correlation is not significant. Hypothesis four cannot be confirmed.

From Table 7 we see the results of an independent samples t-test, which we carried out as an extra indication of the difference in use of formal learning-activities for different ages. We divided the total group (20-43 years of age) in two age-groups. The 'younger' group was younger than 30 years (N = 31), the 'older' group was 30 years and older (N = 36). Although the mean-score of the younger group on formal learning-activities is higher than the score of the 'older' group , the result of the t-test shows that this difference is not significant. Again, hypothesis four is not confirmed.

Table 7
T-Test for Two Groups ('Younger' and 'Older') by Total Extent of Used Formal Learning-activities

	Age	N	M	SD	T	df	p
Total extent of used formal learning-activities	>=30 years	36	2.42	1.03	-1.21	65	.232
	< 30 years	31	2.70	.91			

Because we expect the extent of used informal learning-activities to be higher than the extent of used formal learning-activities, the quotient informal/formal has to be larger than 1.00 for both groups. However, the quotient for the older group has to be larger than the quotient of the younger group. To test if these quotients differ for the two groups, we did a t-test (see Table 8). We see that the mean-score on relation informal/formal learning-activities of the older group is higher than for the younger group. However, the difference is not significant. We conclude that the older group does not learn more informally than the younger group. In sum, based on correlation and t-test calculations, hypothesis (D) 'with the rising of age, managers participate less in formal learning-activities 'cannot be confirmed.

Table 8
T-Test for Two Groups ('Younger' and 'Older') by Relation Used Informal/Formal Learning-Activities

	Age	N	M	SD	T	df	p
Informal/formal	> = 30 years	36	1.91	1.04	1.369	65	.176
	< 30 years	31	1.59	.85			

Conclusions and Discussion

The first conclusion we can draw from this study is that junior managers are indeed pragmatic learners. Learning by doing, which is highly informal, is the learning-activity that junior managers use most. The extent of used informal learning-activities significantly exceeds the extent of used non-formal and formal learning-activities. Explanations for this learning-behaviour can be sought in the fact that managers usually have little time for other things than their primary tasks. Moreover, their pragmatic attitude makes that learning while executing their daily work is most efficient. Apparently, it is wise for organizations to create conditions for informal developmental opportunities in the workplace. For example by introducing coaching- and mentoring systems (Davies & Easterby-Smith, 1984).

A second important conclusion is that a correlation exists between importance and frequency of management-tasks on the one hand, and extent of used learning-activities on the other hand. An explanation for this strong relation is the fact that, in general, managers are to a large extent autonomous in their jobs. As a consequence, they have the freedom to direct learning-activities to the management-tasks they value most. For organizations it is important to show their managers the value of management-tasks, since it appears that this is a crucial factor in using learning-activities. Striking is that managers still seem to pay most value to Traditional Management-tasks. Apparently, Traditional Management-tasks are still the core of management, while also nowadays the importance of HRM-tasks is more and more recognized. Moreover, worth mentioning is that the pattern of learning-activities (most informal, least formal) is valid for all the clusters of management-tasks. Obviously, all management-tasks are learnt in similar ways.

Thirdly, we can conclude that the older a manager is, the less learning-activities he will use in total. This most probably relates to the fact that older junior managers have more job-related experience and therefore need to use less learning-activities than their younger colleagues. Furthermore, we expected to find that the older one gets, the less formal learning-activities a junior manager will use. However, this hypothesis was not supported. An explanation for this might be that, although there was enough variance in age, all junior managers were meeting new tasks and therefore all of them had to learn.

The results presented in this study are mainly descriptive. It was a necessary step, first to describe what types of learning-activities are used by junior managers and to what extent. The next step is to examine the effectiveness of (informal) learning-activities; this is the contribution of informal learning-activities to performance in the workplace. Further analyses will be done to uncover the pattern of effective learning-activities for different management-tasks.

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Integrating Learning with Working--A Reconception of the Role of Workplace Learning

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The nature of work continues to evolve from predictable, deterministic patterns to forms that are more contingent and idiosyncratic. The evolution of work, and of the expertise to perform it, have not been accompanied by innovations in the models used by workplace educators to develop this expertise. For some technical work roles, present models are inadequate for developing the skilled performance these roles require. Using in-depth accounts of actual work activity, this paper examines changes in how work is accomplished. Emergent themes from selected work settings are analyzed against present models of employee development. Using the theories of situated learning and distributed cognition, a reconception of the role of learning interventions is proposed that more fully integrates learning with working.

Keywords: Workplace Learning; Distributed Cognition; Situated Learning

Present models for developing work skills originated in the military and have evolved into the widely used instructional systems design (ISD) model (Gagne, 1962; Campbell, 1984). Efforts to develop and refine models that are responsive to the needs of the high performance workplace have expanded the scope of interventions beyond instruction alone. Present models are more comprehensive and systematic than in the past, yet they reflect a view of developing work expertise that is prescriptive and determinant. While present models are useful for many types of employee development, their potential for developing the type of skilled performance needed in a contingent and dynamic work environment is questionable.

This paper examines how well present models for developing skilled performance meet the challenges posed by certain types of technical work. The paper identifies a key deficiency in the models educators use to develop the skills needed for a particular class of work roles. This deficiency undermines our efforts to promote workplace learning and, if left unaddressed, our credibility as educators and agents of change. It is hoped that the identification of this deficiency will catalyze research to develop new models that are more responsive to the contingent task requirements so prevalent in today's workplace. A framework for integrating learning with working is proposed as a point of departure for this important, new research.

The following sections provide accounts of how work is accomplished in selected work settings. From these work descriptions themes are drawn that pose the greatest challenge to the viability of present models of instruction. Recent enhancements to the ISD model are critiqued against these themes. Finally, a framework for workplace learning is proposed based on this critique that more fully integrates learning with working.

Perspectives on Contemporary Work Practices

This section provides a series of work descriptions that summarize more in-depth studies by researchers who examined the work of six groups: photocopier repair technicians, dairy workers, software support technicians, aircraft carrier personnel, ad hoc work groups, and naval navigators. From these perspectives we gain insight into a particular class of work roles and the demands this work places on the capabilities of those who perform it. They highlight dimensions of skilled performance that warrant further attention from educators and others involved in developing these skills.

These six descriptions of work are not intended to be representative of the various types of work to be found in today's work environments. They are used because they illustrate certain characteristics of how work is accomplished. Thirteen descriptions of work were reviewed to identify features of task performance that challenge the viability of present models of instruction. These studies describe situations at the task level in which workers are confronted with novel or poorly defined problems that cannot be anticipated fully in advance. Thus, this work is difficult to analyze and translate into prescriptive behaviors for task performance. From this pool of studies, six accounts were chosen as the basis for this paper that met the following four criteria. Each account selected provided a description of work at the individual task level that is detailed enough to allow an accurate replication of the work

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behavior performed. Each account is an exposition of a single occupational or functional role. This is important to avoid contaminating the analysis with tasks and responsibilities from other occupational or functional roles that, while present in the same system, are not the work roles of interest in this analysis. In addition, the accounts focused on a particular class of work roles that is technical, rather than interpersonal or managerial, in nature. All of the accounts sought to enhance our understanding of how human expertise can be more effectively developed in natural settings where non-human factors also affect outcomes.

An examination of the characteristics of task performance within these six accounts of work lays the groundwork for a reconception of learning interventions for developing the expertise required by this work.

Photocopier repair technicians. Detailed accounts of how photocopier repair technicians resolve the problems encountered in restoring a malfunctioning photo-copier to working order emphasize the crucial contribution of contextual understanding to the development of their skills. Beyond basic technical expertise, technicians need a richer understanding of the social context of how photocopiers are designed and used. Orr (1990) makes the following observation about successful photocopier repair work:

> "[Photocopier repair] is not simply a matter of finding out what is wrong with the machine; there may be nothing wrong with the machine as a thing, in and of itself. The problem may rather lie in the interaction of the machine as it is, the uses its designers anticipated for it, and the uses, methods desired, understood and chosen by the customers. The designers' interpretation of how one would use the machine cannot preclude other interpretations, but the others, because unanticipated, may be unsuccessful. This may appear to be a problem to the customer whose interpretation of how to use the machine fails" (p. 171).

Diagnosis of the malfunction was complicated because the state of the machine was often unclear, a technical problem that is resolved through the social interaction of the technician, customer and machine. Technicians' skills must not only include techniques for machine diagnosis and repair, but a broader understanding of the social context of use in which customers make demands of the machine regardless of designers' intentions. Accurate reconstruction of the machine-user interaction is rarely possible for technicians, though such insight would greatly expedite the repair process. Instead technicians must construct their own representation of the problem as the basis of making repairs. Problems that could not be fully anticipated in advance demanded contingent responses; the use of scripted repair procedures by technicians was insufficient.

Dairy workers. Scribner (1984) studied the work of two groups of dairy plant workers, product assemblers and wholesale delivery drivers. Product assemblers prepared product orders, composed of milk and other dairy products, for shipment to customers based on computer-generated order forms. Wholesale delivery personnel were responsible for delivering orders to customers, including computing the dollar value of the dairy products on invoices. Scribner studied these tasks, assembling product orders and pricing delivery invoices, to compare the work strategies of experienced workers with those new to the tasks. Workers in this environment were presumed to rely on a combination of procedural knowledge from task-specific rules and pragmatic knowledge gleaned from experience. Greater understanding was sought about the different roles these types of knowledge played in the work strategies of experts and novices. Support was sought for the premise that cognitive skills take shape in the course of participation in socially organized practices. Thus, learning in the context of practice would be an essential determinant in the development of skilled performance.

Reflecting the wide range of institutional and retail customers served by the dairy, each dairy order was unique in size and composition, and consequently, order prices varied. Despite the availability of procedures and computer forms for assistance, wholesale delivery personnel adopted their own alternative methods for pricing delivery invoices (for example, effort-saving algorithms and personal crib sheets) that were not used by those new to the task. At the close of each delivery, experts made use of physical aspects of the environment, such as product containers and shipping cases, as cues for computing sub-totals for customer invoices. Their own pragmatic problem solving gave rise to these strategies for preserving mental effort on-the-job. A parallel demonstration of pragmatic thinking to save manual effort was apparent among product assemblers. Economy of effort functioned as a criterion distinguishing skilled from amateur performance. As opposed to relying primarily on procedural knowledge, successful work strategies were goal-directed and varied adaptively with the changing properties of the problems and resources encountered by workers in the task environment. These contextual factors influenced the development of skilled performance and illustrate how workers in a production environment learn and adapt their skills on-the-job.

Software support technicians. Pentland (1997) provided an insightful commentary on an increasingly ubiquitous role in today's computer-mediated work environment—the software support technicians who provide direct customer service through hot lines. A major challenge for these technicians is locating the sources of error underlying customer problems. Sifting through information from customers, technicians had to decide what was and was not relevant to problems. Compounding the challenge, computer problems frequently interrupted key business

operations of customers. Under the pressure of deadlines, customers were anxious to regain their lost computer capabilities. In addition, customers had diverse software and hardware configurations. Thus, both the urgency and complexity of customer problems confronted software support technicians.

Pentland's account reveals the challenge technicians faced in trying to reconcile the ambiguity of most customer problems with their own rational approach to computer work. The customer problems technicians encountered were poorly defined and often conflicted with the belief that software programs do exactly the same thing every time you run them. If a customer encountered a problem since the last time the program was successfully run, something had to have changed. Lacking a definitive diagnosis of the problem, the preferred solution was to tell customers to remove all unfamiliar system features until the software worked again. The overriding principle was that anything that resolved the problem was justified and acceptable, as long as it worked. The precision and logic suggested in theory were replaced by behaviors that were far more contingent and difficult to anticipate in practice.

From the work of photocopier service technicians, dairy workers, and software support technicians we gain insights into how they skillfully accomplish their tasks, aspects of which may have implications for how this expertise is developed. First, in each situation learning through workplace experience was crucial to the development of skilled performance. Without it technicians could not develop a balanced repertoire of solution strategies. Knowledge of diagnostic methods, common user mistakes, and other technical skills were insufficient if not considered within the broader user context. Learning from experience—one's own experience and the shared experiences of other—is a central part of developing skilled performance. Greater sensitivity to the value of contextual learning is indicated for learning interventions for this type of work. Second, successful work strategies in technical work environments are more contingent on environmental factors than the logic and coherence of technology suggests. The problem solving of software technician and dairy workers depended on conditions they encountered in the task environment, forcing them to rely on pragmatic rather than rational solutions.

The work perspectives in the next section focus on collective activity—that is, the work-related efforts of more than one person. Some tasks, such as those required to pilot large ships, develop fundamentally new products, and maintain the flight schedules of aircraft carriers, are necessarily collective efforts that cannot successfully be accomplished by an individual working alone, no matter how skilled the worker. In these instances, the coordinated efforts of several skilled workers are needed for safe, error-free performance.

Aircraft carrier personnel. Weick and Roberts (1993) used flight operations on aircraft carriers to illustrate the effects on performance of the presence or absence of *collective mind* in personnel responsible for launching and recovering naval aircraft. They defined *collective mind* as "a pattern of heedful interrelations of actions in a social system" (1993, p. 357). According to Weick and Roberts, as mindful comprehension among personnel increases, organizational errors decrease. Collective mind is shown to be integral to the successful execution of several key operational tasks requiring the skillful coordination of multiple onboard functions. For example, Weick and Roberts describe the process of taxiing a plane to a parking position on a carrier deck after a successful night landing. Without the benefit of daylight, the pilot relies on the guidance provided by hand signals from the taxi director who is out in front of the plane. Skillful coordination can mean the difference between successfully parking the plane on the cramped carrier deck or taxiing the plane over the side. Each actor, the pilot and taxi director, depends on each other's heedful interactions for the safe execution of the task. Other potentially dangerous tasks are described such as aircraft launch (takeoff), recovery (landing), on-deck refueling, live ordnance loading, and "spotting" (moving) aircraft on deck. Skilled, error-free performance on these tasks requires mindful interaction among personnel, a level of interaction that develops when learning and working are closely integrated.

Ad hoc work groups. Organizations seeking greater responsiveness to rapid changes in the marketplace have increasingly turned to using *ad hoc work groups* to accomplish specific projects. A group developing a fundamentally new product must undertake a complex task under time constraints in non-routine situations (Ancona & Caldwell, 1990). Ad hoc groups consist of members who otherwise would not work together and will likely disband after completing their work. New product development cannot be completed by a single person or work unit, and thus, require the interrelated contributions of group members which are, in turn, informed by needs and constraints external to the group. Ad hoc groups are further challenged by the need to establish norms and guidelines for reporting progress and dividing task responsibilities despite short-term goals. Short time deadlines emphasize efficient learning and task completion, rather than gradual socialization and group development. Yet, despite these constraints, group members must develop a shared sense of how to best distribute the responsibility for new product development. In short, the distributed nature of expertise in ad hoc work groups requires shared accountability for accomplishing a common goal in a short time.

Naval navigators. Hutchins (1990) provided an in-depth account of the expertise required for navigating large ships. Responsibilities are distributed among the members of a navigation team composed of three to six

members depending on the size of the ship. Members of the navigation team who are not located in the pilothouse interact continuously using radios, closed-circuit television, and visual contact. This is especially important for error-free navigation in confined or busy waterways. The career trajectories of naval navigators are such that most members of the team have previously held the positions of one of their junior colleagues. Advancing through progressively difficult navigation jobs allows for the overlapping distribution of expertise among members of the team. The expertise for navigation is not fully captured by any single member's conception of the navigation task. As Hutchins (1990) observes, "[the] sequence of actions to be taken need not be represented any where in the system. If participants know how to coordinate their activities with the technologies and people with which they interact, the global structure of the task performance will emerge from the local interactions of the members" (p. 209). The distributed nature of the expertise required for naval navigation and other group work has implications for workplace learning that are examined next.

Themes from the Workplace

This overview of work practices presents a picture of the sophisticated and demanding nature of this particular class of work roles. Three themes are drawn from these work descriptions about the nature of skilled performance required in these settings. These themes were explicitly identified in the six descriptions of work by the researchers as features of the work settings they examined. The first theme, the contingent versus deterministic nature of work strategies, was a feature of all six work descriptions. Each of these studies was consistent in its emphasis of the need for employees to go beyond scripted procedures to resolve novel and poorly defined work problems. The second theme, the distributed nature of expertise, was a prominent feature of the four accounts that examined the work of groups—photocopier repair technicians, aircraft carrier personnel, ad hoc work groups, and naval navigators.

The third theme, the integration of learning and working, was manifested in different ways in each of the work descriptions. Learning in the context of work for new product development teams was characterized as " 'playing in the sandbox'; members were occupied with exploring new product ideas and determining their feasibility" (Ancona & Caldwell, 1990, p. 179). For aircraft carrier personnel, Weick and Roberts (1993) describe this phenomenon as "teams of people thinking on their feet and doing the 'right thing' in novel situations" (p. 358). Learning could not be distinguished from the work activities of photocopier repair technicians, whose expertise depended on "the interactive construction of an understanding and a basis for action in the context of the problematic situation" (Orr, 1996, p. 12). Similarly, the successful performance of dairy workers relied on "cognitive skills [taking] shape in the course of individual participation in socially organized practices" (Scribner, 1984, p. 37). This theme was also evident in Hutchins' exhortation that any new naval navigation system "incorporates ways for operators to learn their jobs while working" (p. 219) and in Pentland's (1997) conclusion that "the most important insight is that local knowledge is crucial in software support" (p. 127). In each of these situations, skilled performance could not be developed without affording the opportunity for learning in the context of work.

More significantly, these themes were drawn from the work descriptions because they emphasize features of the task environment that are not adequately addressed by present instructional models. The evolution of this work has not been accompanied by innovations in the models educators use for developing this expertise. The following discussion of these themes provides the basis for the critique of present models of instruction.

Contingent versus deterministic work strategies. Rather than the rational and deterministic behaviors suggested by operating procedures and computer logic, successful work strategies are contingent upon multiple factors and expressed through pragmatic behavior. Software support technicians were challenged by problems from customers who were using multiple hardware configurations and software programs, and who each had their own idiosyncratic computer terms and techniques. The technicians' limited problem solving algorithms were inadequate for the variety and unpredictability of these problems. In the case of photocopier repair, the development of the now familiar control panel displays that aid copier users in freeing paper jams and other common problems was the best that engineers could do to reduce the need for service calls. With common, predictable copier problems made transparent enough that customers could resolve them, technicians were left with the breakdowns of ambiguous origins that could not be resolved with schematics and procedural knowledge alone. Scribner's study of dairy workers showed that the need for adaptation to unanticipated situations was not limited to technicians working with computers and electronics. To deal with the unique characteristics of each delivery situation, expert drivers bypassed invoicing procedures and relied instead on pragmatic rules of thumb, makeshift crib sheets, and other shorts cuts afforded by the task environment.

In each of these work settings, employees were confronted with novel or poorly-defined problems that could not be fully anticipated in advance. Successful performance required employees to go beyond scripted procedures to

resolve problems in innovative ways. To understand and respond to these ambiguous situations, they made resourceful use of materials, local conditions, and social circumstances, thus deploying contingent work strategies that reflected the changing properties of the task environment.

The distributed nature of expertise. Skilled performance in many work environments is a function of expertise that is distributed among group members. In the group context learning is a collective activity in which members construct their actions, understand that the system consists of themselves and others, and interrelate their actions within the system (Weick & Roberts, 1993). Rather than limited to a single agent, the *learner* is an aggregate concept representing a corps of individuals engaged in collaborative effort to achieve a common goal.

While present models of instruction feature a comprehensive assessment of the learning characteristics of the individual, they do not adequately address learner characteristics for situations in which the expertise to be learned is distributed. For example, readiness for learning and the need for structure are two learner characteristics not accounted when the skills to be developed are shared. Traditional models of instruction cannot accommodate variability in learner characteristics while, at the same time, developing the desired level of group performance.

The descriptions of group work presented also illustrate the need for greater clarity in the distinction between group dynamics and group performance. The development of group member interrelationships through identifiable stages of intimacy (Tuckman, 1965) is distinct from the development of the level of mindful interaction that yields synergistic performance. It is quite possible for an undeveloped group to become more developed without necessarily achieving the level of mindful interactions that yields high performance. This reflects Weick and Roberts' distinction between the development of group and the development of collective mind. Weick and Roberts (1993) observed that the combinations of "developed group—undeveloped mind" and "undeveloped group—developed mind" are not only possible, but quite prevalent. The dynamics of "developed group—undeveloped mind" are apparent in the experiences of cults (Galanter, 1989), the groupthink phenomenon (Janis, 1982), and the failures of team initiatives (Katzenbach & Smith, 1993). In these instances, comprehension and readiness for mindful interaction declines, regardless of how long the group has been together. Katzenbach and Smith describe the disappointing performance of teams in industrial settings established to accomplish key business goals that "turned from achieving performance gains to improving morale and openness" (1993, p.192). While acknowledging the importance of social and technical integration, the dynamics of mindful interaction that produce high performance are not dependent on formal socialization and group development. High performance is frequently achieved by undeveloped groups (that is, those not passing through stages of group development) (Ancona & Caldwell, 1987; Weick & Roberts, 1993).

The integration of learning and work. The work descriptions show that the distinction between learning and working has significantly eroded in today's workplace. Skilled performance in the work roles described would not have developed if workers did not have the benefit of learning in the context of their work. A more precise definition of *skill* clarifies the importance of integrating learning and work by revealing the contextual nature of skill.

The term *skill* is used to refer to different kinds and levels of human capability. We must first determine whether skill is an attribute of the person, of the task, or of both (Spenner, 1983). Darrah portrayed skills as an attribute of the person such that a skilled worker "can move freely between [workplaces], carrying his or her skills like so much luggage, and transferring those skills effortlessly into new contexts" (1994, p. 67). On the other hand, skill has been grounded in the contexts of its use to the degree that skill ceases to be an attribute of an individual worker, who could not take the skill away, but instead, resides in the interaction of co-workers as skill unfolds in a particular setting (Rogoff & Lave, 1984; Brown & Duguid, 1991).

To further specify the nature of skill, distinctions can be made among the concepts of *skill*, *aptitude*, and *task*. The notion of *task* is conceptually distinct from the performer of the task. A task, arising from particular environmental needs or wants, consists of activities to be performed to achieve desired outcomes. Human *aptitude* is a function of the person that represents individual capacity for a given performance. Individuals are said to possess innate aptitude for spatial reasoning, verbal fluency, and other capabilities. The concept of *skill* adopted here is consistent with the notion that skill is a phenomenon determined by both the performer and the task (Attewell, 1990; Spenner, 1983). Skill is a function of the individual and of the environmental context, that is, the task, within which the skill is demonstrated. *Skill* is not defined exclusively in terms of human capabilities; it retains features of both the performer and the environment in which it is expressed.

Thus, the environment presents constraints and affords opportunities for performance that shape the development of work skills. The influential role of the environment on the development of skilled performance emphasizes the importance of experience and learner control in the learning process. This view is consistent with the theory of situated cognition, in which learner activity and perception precede mental representation (Brown, Collins, & Duguid, 1989). The issue is not the centrality of experience to learning. Experience is crucial to learning (Kolb, 1984; Schon; 1983). Instead workplace educators must give more attention to how the learning intervention

changes when learner control and experience are more prominent. The point is that development to enhance the skilled performance of employees cannot be separated from the context in which the performance is expected to occur.

These three themes—contingent versus deterministic work strategies, the distributed nature of expertise, and the integration of learning and working—present a formidable challenge to the viability of present models for developing skilled performance. In present models, instruction is based on systematic analysis and program development, and then offered as a program that precedes work performance. Yet, the contingent nature of the task environment demands adaptive work strategies that cannot be fully anticipated in instruction based on predetermined analysis and objectives. Moreover, the notion of distributed expertise suggests that collective consciousness is an important element in the development of skilled performance. Yet, present models of instruction address either the job role or group development. Work in a variety of settings demands that workers continuously shift between individual and group expectations to exhibit seamless performance across job boundaries. For work that requires the coordinated efforts of individuals and the group as a whole, we cannot rely on instructional models that address one or the other. Recent enhancements to the ISD model have anticipated some of these concerns. The next section discusses how well these enhancements address the challenges to the ISD model presented by these themes.

Recent Enhancements to the ISD Model

Efforts to develop models that are responsive to the needs of the high performance workplace have expanded the scope of interventions beyond instruction alone (Deterline & Rosenberg, 1992; Rummler & Brache, 1995; Swanson, 1994). Nonetheless, instruction continues to have a powerful hold on the models and methods used by those concerned with improving human performance. The instructional systems design (ISD) model was designed for developing task-related skills and is still the most popular method for job skills and technical training. Since its introduction in the 1960's, revisions and extensions of the ISD model have come from many sources (Andrews & Goodson, 1980; Seels & Glasgow, 1990).

The ISD model recently has been criticized as too prescriptive, linear, time and resource dependent, and insensitive to the context of practice. This critique was catalyzed by Brown, Collins and Duguid's (1989) call for more meaningful "situated" learning experiences. Emphasizing the importance of learner participation in "communities of practice," Brown et al. proposed cognitive apprenticeships as a means for creating learning experiences within the realistic context of practice. Streibel (1991) challenged the field of instructional design to create instructional systems that are more sensitive to Brown's situated learning paradigm. Compared with traditional models Streibel characterized situated learning as more flexible, contextualized, emergent, learner-centered, and interactive. Gustafson (1993) suggested that we need new ISD models. The response to this criticism has weighed heavily toward proposed enhancements to the ISD model, rather than fundamental change in the model.

Richey (1995) discussed the changes anticipated in instructional design based on the influences of general systems theory, cognitive learning theory, constructivism, situated cognition, and chaos theory. Her analysis suggested that enhancements to the ISD model are most likely in the areas of the enhanced roles of analysis and evaluation, greater learner control of instruction, transfer of training, and the continued integration of instruction with technology. Dick (1993) suggested enhancements to the ISD model through clearer definition of the organizational problem(s) to be addressed, refining the use of electronic performance support systems—EPSS (an interactive database, learning tutorials, and expert diagnostic system—all integrated through a desktop user interface), and using the "layers of necessity" approach to instructional design, which advocates using only those design elements necessary for accomplishing a given project (Tessmer & Wedman, 1995). Tessmer and Wedman argued that instructional design models could become more context-sensitive with the use of three techniques—layered analysis, instructional scenarios, and prototyping. Winn (1993) suggested more flexibility in the choice of learning setting and proposed apprenticeships, cooperative programs between schools and employers, and more direct involvement of the community in education. Proposed enhancements to instructional models have been also cast in terms of their compatibility with the constructivist view of learning. Using arguments from constructivism, Lebow (1993) offered a set of principles that integrate the affective and cognitive domains of learning and proposed that critical enabling objectives in instruction.

Are enhancements to the ISD model enough? While these developments are encouraging, they do not address the demand for the skills needed in contingent work environments where expertise is often distributed among group members. Advancements such as EPSS, layered analysis, more effective learning transfer, and other improvements in instructional design foster more context-sensitive learning. However, if subsequent refinements

and computer technology cannot fully integrate learning with working, it may be time to consider fundamental changes to, or even replacement of, the ISD model.

A learning intervention model that is more context-based and amenable to the distributed nature of expertise is needed. At a minimum the development of work skills must arise more naturally out of the conditions and expectations of the performance itself. This requires a fundamental shift from viewing workplace learning as a phenomenon largely driven by educational offerings to a view of learning as a developmental philosophy that permeates organizational life in which learning is enriched through work, and working is enriched through learning. This type of learning does not rely exclusively on educational programs. Programs are episodic events that are time-specific and topic-specific by design. A key question is how much of an experience to develop skilled performance can be meaningfully described in advance? The lessons about how people actually accomplish the work described here suggest that far less can be prescribed in advance than suggested by present models. Comprehensive instruction cannot precede work performance for the development of skills needed in environments that place such a premium on contingent work strategies. The opportunities and constraints afforded in actual work contexts are indispensable for improving this type of skilled performance, for it is the learner who ultimately must translate these experiences into expertise.

Learning models must also be flexible enough to simultaneously accommodate individual and group development. This innovation will not be possible as long as models are based on pre-determined analysis and development and offered as instructional programs. The flexibility for simultaneously fostering individual and group learning can only arise from models in which learning occurs in the context of work. The dynamics of what is expected of the individual and of the group in the workplace cannot be anticipated fully by instructional designers in advance.

Present models are useful for many types of employee development such as new employee orientation, introducing employees to new skills, communication and interpersonal skills training, developing group dynamics, and in other areas. The framework proposed here addresses task-related performance improvement. It may not be appropriate for situations where the focus is on interpersonal relations, cultural change, or in stable work environments where performance expectations and resources change infrequently. The development of skilled performance requires that our best strategies for employee development be flexibly integrated with the dynamics of the workplace. In short, the framework proposed here more fully integrates learning with working.

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Learning Transfer in a Social Service Agency: Test of an Expectancy Model of Motivation

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Valence-instrumentality-expectancy (VIE) theory of motivation has been frequently used to study work motivation but has not been applied to motivation to transfer research. In this study, a VIE approach to motivation to transfer is tested using structural equation modeling in a sample of 705 state social service agency personnel. Employees completed the Learning Transfer System Inventory (LTSI). Results indicated that utility predicted motivation to transfer, but rewards did not. Self-efficacy was not a significant predictor of motivation. The VIE model provided a strong fit to the data.

Keywords: Transfer, Expectancy Theory, Motivation

Training alone will do little to increase individual or organizational performance unless what is learned as a result of training is transferred into on-the-job behavior. Including indirect costs, public and private sector organizations in recent years have spent over $200 billion annually on formal workplace training (Bassi, Gallagher, & Schoer, 1996). Of this expenditure, only 10% is projected to pay off in performance improvements resulting from the transfer of learned knowledge, skills, and abilities to the job (Baldwin & Ford, 1988). Although the exact amount of transfer is unknown, learning transfer is the most frequently cited reason why training fails (Broad & Newstrom, 1992). However, knowledge is limited about when, why or how the dynamics of learning transfer work.

A fundamental area in which current transfer research is deficient is in modeling the learning-transfer process. Researchers have recognized the necessity of building comprehensive, integrated models of the learning-transfer process in order to fully understand and reliably identify the causes and effects of training success or failure (Holton, 1996). Researchers examining various models of learning transfer in organizations have produced findings indicating that a variety of individual, process, and environmental variables can significantly affect an individual's ability and motivation to transfer learning to job performance. For example, research by Noe and Schmitt (1986) suggested that trainee reactions to training may either mediate or moderate relationships between intervening variables and training outcomes. Learning has been shown to be related to transfer behavior (Rouiller & Goldstein, 1993) and self-reported increases in productivity (Xiao, 1996). Trainee characteristics including age, self-efficacy, and confidence have also been identified as important factors influencing learning transfer. Other studies have indicated perceived relevance of training is a significant design variable supporting transfer. Studies also point to the importance of work environment factors such as supervisor support, rewards, and opportunity to perform which indicate the important role that individual perceptions of specific organizational elements, often referred to as transfer climate, have in facilitating transfer. In addition, research suggests that an organization's continuous learning culture, or the shared perceptions about a broad, comprehensive set of organizational elements (e.g., values and beliefs) can also play a role in transfer (Tracy, Tannenbaum, & Kavanaugh, 1995). Taken together, research portrays transfer as a complex process and explicitly recognizes the value of useful models.

Unfortunately, only limited research has been done with these models and none have been validated by further research. This may partially explain why 1) our understanding of the transfer of training process is still greatly restricted; 2) theorizing about transfer of training has not produced many generalizable principles; and 3) there is currently no generally accepted theoretical model of learning transfer in organizations. Until more work is done to develop, test, and refine learning transfer models, we will be unable to make significant progress in this important area of research.

The Role of Valence-Instrumentality-Expectancy in Learning Transfer

Motivational factors are among the most efficient predictors of training-related performance, but have generally received little research attention (Latham, 1988). Several authors have noted the need for more research directed at individual and situational factors that influence motivation and have suggested the usefulness of the valence-instrumentality-expectancy (VIE) theory for studying training-related motivation (Baldwin & Ford, 1988). Some

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research has heeded this call. Noe and Schmitt (1986) examined a number of motivational influences on training effectiveness including the impact of expectancies on motivation to learn. Mathieu, Tannenbaum, and Salas (1992) adopted an instrumentality approach that examined the influence of trainees' perceptions that success in training would lead to better job performance and then to valued outcomes. In general, the VIE approach to training-related motivation is valuable because it facilitates the study of both individual and situational factors and their relationship to expectancy perceptions.

Valence-Instrumentality-Expectancy (VIE) is a "decision theory of human motivation and choice in the work situation" (House, Shapiro, & Wahba, 1974). A core concept of VIE theory is that the psychological interaction of an individual's beliefs about expectancies, instrumentalities, and valences create a motivational force to act in ways that maximize benefit and minimize pain (Vroom, 1964). According to the VIE model, an individual chooses behaviors and level of effort based on three key mental components: 1) the value (valence) he/she perceives to be associated with the outcomes of the behavior; 2) the belief that a certain performance level will lead to other outcomes (instrumentality); and 3) the strength of an individual's belief that attaining a certain outcome is possible (expectancy). These three components represent beliefs held by an individual about effort-reward connections.

Figure1: Expectancy Model of Motivation to Transfer Learning

An expectancy model of factors influencing motivation to transfer, consistent with Lawler's (1971) modification of Vroom's (1964) original theory, is shown in Figure 1. The relationships in the model are similar to those suggested in a training research and evaluation model proposed by Holton (1996). Motivation to transfer is seen as a function of 1) utility, or expectancy beliefs about extent to which learning in training is expected to have useful job application; and 2) rewards, or the extent to which the application of learning on-the-job is perceived to result in some valued outcome for the individual. Learning with high utility value is more likely to be associated with high reward potential, suggesting a dependency relationship between utility and rewards.

Hypothesis 1a: Utility will be positively associated with motivation to transfer.
Hypothesis 1b: Rewards will be positively associated with motivation to transfer.
Hypothesis 1c: Utility will be positively associated with rewards.

Motivation to transfer was also hypothesized to be partially a function of a person's self-efficacy beliefs concerning learning transfer. In general, self-efficacy refers to an individual's belief in his or her ability to mobilize personal resources and courses of action to meet specific situational and task demands (Gist, 1987). This construct is seen as a potential intervening variable between training and performance in addition to being a useful self-construct for predicting performance on specific tasks. Researchers have reported significant positive correlations between level of self-efficacy and task performance, training performance, post-training transfer, and job performance. Research has also demonstrated a self-efficacy - performance relationship for both cognitive (Gist, Bavetta, & Stevens, 1990) and interpersonal skills (Gist, Schoerer, & Rosen, 1989).

Hypothesis 2a: Performance self-efficacy will be positively associated with motivation to transfer.
Hypothesis 2b: Performance self-efficacy will be positively associated with utility.

Method

Subjects Participants in this study were 705 social service caseworkers from geographically dispersed units in a state Office of Family Support. For reasons of confidentiality, neither the identification of the units responding in this study nor the number of participants from specific units was obtained. The participants were part of a larger study to assess the obstacles to training transfer in the Department of Social Services and other state governmental departments.

Analysis Structural equation modeling (SEM) with LISREL 8 (Joreskog & Sorbom, 1993) was used to test the causal relationships between variables. The application of SEM provides a way to 1) model and estimate multiple and interrelated causal relationships, and 2) represent unobserved variables or concepts in these relationships and account for measurement error in the estimation process (Hair, Anderson, Tatham, & Black, 1998). One advantage of LISREL is that it provides tests of relationships between constructs that are not attenuated by measurement error (Loehlin, 1987).

Following a procedure suggested by Anderson and Gerbing (1988) and Hair et al. (1998), data analysis was conducted in two stages. First, the adequacy of the measurement model was examined to evaluate the contribution of each item to the construct (latent variable) being measured. This is equivalent to a confirmatory factor analysis of the measured constructs. Second, the structural model was examined to test the fit of the hypothesized model with the data. For both the measurement and structural models, a wide variety of goodness-of-fit indices are available for assessing model fit. To assess overall model fit, the chi-square statistic (χ^2) and the goodness-of-fit index (GFI) were examined. The root mean square error of approximation (RMSEA), a goodness of fit measure relatively insensitive to sample size, and the root mean square residual (RMR), were examined as complementary measures to the GFI and χ^2. The non-normed fit index (NNFI) represents the incremental fit obtained by comparing any two nested models. The adjusted goodness-of-fit (AGFI) was evaluated because it adjusts the GFI by the degrees of freedom in order to consider the parsimony of the model. To compare the model's fit in relation to the worst and best fit attainable from other nested models, the normed-fit index (NFI) was examined. In general, a good fit of the data is indicated by RMSEA and RMR values that approach zero (with those larger than .08 as unsuitable), and GFI, AGFI, NNFI, and NFI values that approach 1, with values less than .90 indicating the potential for substantial improvement (Medsker, Williams, & Holahan, 1994). Finally, the coefficient of determination (R^2) was examined in relation to the structural model as an indicator of variation accounted for, not of model fit per se.

Measures All measures used in this study were obtained using the Learning Transfer System Inventory (LTSI), formerly called the Learning Transfer Questionnaire (LTQ) (Holton, Bates & Ruona, 1999; Holton, Bates, Ruona, & Leimbach, 1998). The LTSI consists of sixteen scales representing factors affecting the transfer of learning to work performance. Scales represent motivational, ability and environmental elements. The scales have shown good reliability and initial evidence of criterion validity in earlier versions of the instrument (Bates, Holton & Seyler, 1997; Seyler, Holton, Bates, Burnett & Carvalho, 1998). All items use a five point Likert-type scale ranging from "strongly disagree" to "strongly agree." Because it is generally suggested that a minimum of three indicator variables be used for each latent construct (Hair, et al., 1998), seven scales were initially selected as indicators for rewards and utility.

Utility indicators - Three scales served as indicators for utility:

1) Transfer-effort performance expectations (TEPE) – the expectation the effort devoted to transferring learning will lead to changes in job performance.
2) Performance outcome expectations (POE) – the expectation that changes in job performance will lead to outcomes valued by the individual.
3) Content validity – the extent to which individuals judge the content of training to accurately reflect job requirements.

VIE models in current use generally break expectancy connections into two key components: the expectancy that effort will lead to successful performance (transfer effort - performance expectancy) and the expectancy that this performance will produce valued outcomes (performance outcome expectancy) (Lawler, 1971). High TEPE is expected to be positively associated with utility: individuals believe learning is useful because its application will improve their performance. High POE is also expected to be positively associated with utility. Thus, learning is useful because it improves performance and subsequently leads to outcomes that are valued by the individual.

A key aspect of learning transfer relates to the degree the content and design of the learning experience enables individuals to apply their learning. Training content that accurately reflects job requirements, addresses work-related performance problems, or facilitates work-related goals is more likely to be applied than that which does not (Baldwin & Ford, 1988). Valid training content is therefore believed to influence motivation to transfer by virtue of its perceived job-relevant utility.

Reward indicators - Four scales served as indicator measures of the latent construct rewards:

1) Openness to change – the extent to which prevailing group norms are perceived by individuals to resist or discourage the use of knowledge and skills acquired in training.
2) Supervisor support – the extent to which supervisors support and reinforce the use of learning on-the-job.
3) Peer support – the extent to which peers reinforce and support the use of learning on-the-job.
4) Negative personal outcomes – the extent to which individuals believe that applying skills an knowledge learning in training will lead to outcomes that are negative. The negative personal outcomes scale was reverse coded so that that high scores indicated the extent to which individuals believed that applying learning on-the-job would not lead to outcomes perceived as negative. All other scales used in this study were scored so high scores represented high levels of the construct.

Tracy et al. (1995) demonstrated transfer behavior could be influenced by employee beliefs that their organization values the importance of ongoing knowledge acquisition and use. Studies by Baumgartel and associates (Baumgartel & Jeanpierre, 1972; Baumgartel, Reynolds, & Pathan, 1984) showed that perceptions of organizational growth orientation, freedom to set personal goals, non-restrictive rules and procedures, encouragement of risk-taking and approval of innovation and experimentation, and rewards were closely associated with high transfer rates. The present study tests whether peoples' expectancy perceptions can be influenced by their perceptions that their organization values and rewards learning, innovation, and transfer. We expect the more an organization positively rewards learning and its job application, the more individuals will recognize those rewards and be motivated by them.

Although virtually unstudied in HRD research, there is some indication that work group norms may be an important factor in learning transfer. Openness to change refers to the extent to which prevailing group norms are perceived by employees to resist or discourage the use of new learning and skills. An openness to change construct has been found to be significant predictor of supervisor ratings of transfer behavior (Bates, 1997). Research investigating conceptually similar variables has shown that openness to experience (Barrick & Mount, 1991) and participants' belief that the application of new knowledge and skills would disrupt the functioning of current workgroups (Hastings, Scheckley, & Nichols, 1995) are important factors in understanding knowledge acquisition and use. To the extent that people believe their workgroup supports change, they will also believe the effort they expend to make change will pay off in improved performance. Thus, an individual's perceptions of his or her workgroup's openness to change are expected to directly influence reward expectations.

The importance for transfer of support behaviors exhibited by supervisors and peers has been suggested by a number of authors. Bates (1997) found interpersonal support behaviors (e.g., peer support, supervisor opposition to the use of new skills) to be among the most powerful predictors of supervisory ratings of learning transfer. Other research points to the significant influences that supportive supervisor behavior can have on the use of new learning on-the-job (Broad & Newstrom, 1992). Although indications are that supervisor and peer support can play a strong role in learning transfer, more research is needed to establish both their value and precise causal role. Motivationally, these factors are important because they may impact an individual's expectations and beliefs about the value of learning transfer (Farr & Middlebrooks, 1990). Thus, individuals receiving support for learning transfer from peers or supervisors may believe it will result in better job performance. Since supervisors also commonly have some control over extrinsic (e.g., pay, praise) rewards, their support may influence reward expectations. Under

working conditions with relatively high levels of co-worker interaction and interdependence (e.g., self-managing work teams), peers and co-workers may have similar kinds of control.

Motivation to transfer - The motivation to transfer measure was assessed using four items on the LTSI. Unlike the seven initial indicator variables, these items were entered into the measurement model as indicator variables to allow LISREL to calculate the reliability.

Performance self-efficacy - This variable was initially assessed with four items from the LTSI, entered into the measurement model just like motivation to transfer. Procedure Data were collected from a single questionnaire distributed to the different Family Support units by unit Directors. Unit Directors attended a meeting in which the researchers explained the objectives of the questionnaire and provided Directors with guidelines for distributing the questionnaire to their caseworkers. Respondents were instructed to complete the questionnaire within five days and return it via enclosed stamped and addressed envelope to the researchers. The instrument was administered to 905 individuals with 784 questionnaires returned for an 86.6% response rate.

Results

Measurement model A covariance matrix was used for both measurement and structural model tests. The analysis of the measurement model was conducted in two steps. First, confirmatory factor analysis was conducted on all scales in the LTSI with this data. This analysis produced a chi-square value of 2020.52 (df = 783, $p < .001$). Other fits indices included GFI = .85, AGFI = .83, NFI = .84, NNFI = .88, RMSEA = .054, and RMR = .049. These values indicated the fit between the proposed measurement model and the observed data were not strong but deemed adequate to proceed. All items loaded on their a priori determined factor and all the lambda values (similar to factor loadings) were statistically significant.

Next, given an acceptable fit from the confirmatory factor analysis, the number of parameters in the final model was reduced by entering the scale scores for the seven indicator variables instead of entering all the items in the model. This created a new measurement model with the seven indictors for the utility and reward latent variables, plus the eight items as indicators for motivation to transfer and performance self-efficacy. This measurement model was also analyzed, producing a chi-square value of 299.31 (df = 84, $p < .001$).). Other fits indices included GFI = .94, AGFI = .91, NFI = .89, NNFI = .90 RMSEA = .066, and RMR = .038. These values indicate a good fit for the measurement model so analysis of the structural model proceeded.

Table 1 shows the intercorrelations of observed and latent variables and the scale reliabilities on the diagonals. All scales had adequate reliabilities (α = .78 to .90).

Table 1: Correlations Among Observed Variables and Latent Variables

Observed	1	2	3	4	5	6	7	*Latent*	1	2	3	4
1- Content Validity	--							1- Utility	--			
2- Openness Change	.23	--						2- Rewards	.75	--		
3- Peer Support	.34	.27	--					3- Mot Transfer	.76	.50	--	
4- Supervisor Support	.28	.20	.43	--				4- Perf Self-Eff	.38	.29	.27	--
5- POE	.39	.21	.38	.44	--							
6- Neg Pers Outcome	.23	.09	.32	.26	.25	--						
7- TEPE	.43	.14	.36	.29	.42	.16	--					

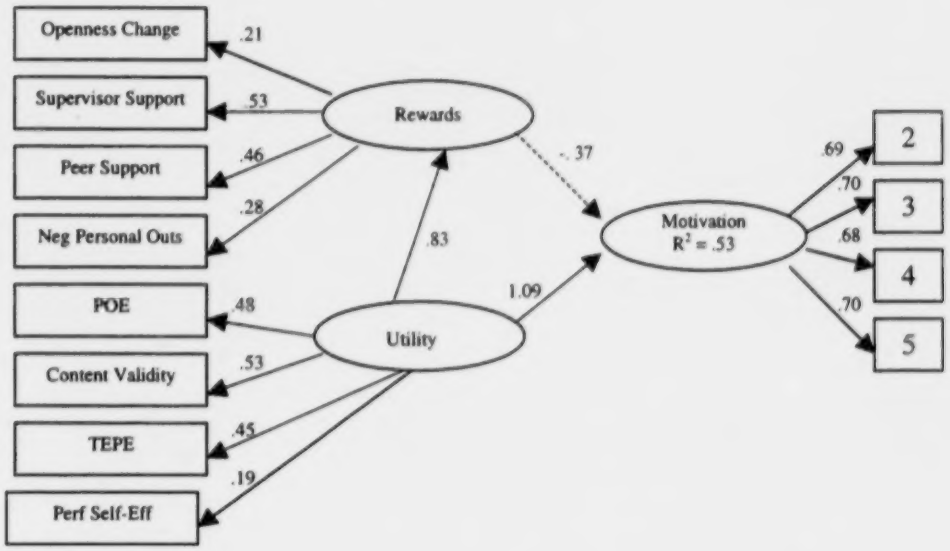
Structural model Five paths were tested in the initial structural model (see Figure 1). The initial structural model produced a chi-square value of 299.31 (df = 84, $p < .001$). The GFI (.94), AGFI (.91), NFI (.89), NNFI (.90), RMSEA (.066), and RMR (.038) indicated acceptable fit. The overall R^2 for the model was .53. However, two of the paths were not significant: Rewards to Motivation to Transfer and Performance self-efficacy to Motivation to

Transfer. Thus, the hypothesized influence of performance self-efficacy on motivation to transfer was not supported.

A revised model was analyzed removing the path from performance self-efficacy and changing it to an indicator of utility using its scale score. The path from rewards to motivation to transfer was left intact as there is strong theoretical rationale for it. In addition, this sample is a public sector organization within which few rewards existed for any type of performance improvement.

The revised structural model, shown in Figure 2, produced a chi-square value of 172.16 ($df = 51$, $p < .001$). The fit indices improved somewhat with a GFI (.95), AGFI (.93), NFI (.91), NNFI (.92), RMSEA (.063), and RMR (.029). All are indicative of strong fit. The overall R^2 for the model was .53. All paths to indicator variables were significant and in appropriate ranges. The path from Rewards to Motivation to Transfer was non-significant (B = -.17).

Figure 2: Structural Model with Path Coefficients



Discussion

Despite the popularity of expectancy theory as a foundation for understanding training-related behavior, constructs representing various elements of the theory have not previously been developed and tested in the context of learning transfer. In this study, utility was a significant predictor of learning transfer motivation. Individuals were more motivated to apply learning on the job when they perceived that transferring learning would be useful in helping them improve their job performance. This finding partially supports an expectancy theory approach to understanding learning transfer motivation and has direct implications for diagnosing a learning transfer situation and changing aspects of the situation to obtain higher levels of effort from trainees. According to expectancy theory as applied in this study, learning must be perceived as job-relevant if individuals are to be motivated to apply it. Training perceived to have little or no utility would also have little motivational value. Thus, by examining individual expectancies, investigators can begin to identify motivational problems and opportunities in training situations. Research suggests a number of techniques for enhancing utility expectations including appropriately framing the purpose of training (Quinones, 1995), demonstrating organizational support for training (McFarlane, Shore, & Wayne, 1993), discussing negative pre-training events (Smith-Jentsch et al., 1996), providing trainees the opportunity to be involved in training design (Clark, Dobbins, & Ladd, 1993), and communicating supervisory expectations of trainee performance in training (Eden & Ravid, 1982).

Rewards were not a significant predictor of motivation to transfer in this study, contrary to what would be expected from expectancy theory. One explanation is that this is a function of the sample which was drawn from a

state social service agency. In the state civil service system, there are few direct rewards for performance so participants may have perceived few rewards for participating in training. In addition, skills and training performance are not usually part of the performance review process, hence supervisors would offer few formal rewards for training transfer.

Contrary to the hypothesized moderating role of self-efficacy, the lack of a significant positive association with motivation suggests the influence of self-efficacy on transfer motivation may be primarily through utility perceptions. Performance self-efficacy was found to be positively associated with utility, indicating that individuals who felt confident in their ability to apply new learning also viewed learning as more useful. Thus, boosting an individual's self-efficacy with regard to their ability to change performance can indirectly enhance the likelihood that learning will be transferred.

These results show that the VIE framework is a useful one for predicting motivation to transfer. However, private sector data are needed to further test the reward-motivation to transfer relationship which was not significant in this public sector sample.

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The Relationship Between Learner Utility Reactions and Predictors of Learning Transfer: Implications for Evaluation

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Participant reaction measures are increasingly shown to be insufficient and unreliable indicators of training effectiveness. Highly overused in practice, we now see that reaction measures have fostered a narrow view of evaluation and neglected important aspects that influence HRD outcomes of learning, performance, and organizational results. New research on transfer of learning is contributing to enhanced understanding in this area. This study explores the relationship between learner utility reactions and predictors of learning transfer.

Keywords: Reaction Measures, Evaluation, Transfer of Learning

Reaction measures remain one of the most overly-used methods of evaluation in the field of HRD today. A recent benchmarking survey completed by ASTD found that 94% of the organizations surveyed collected participant reaction information, 34% measured learning, 13% evaluated transfer of learning, and 3% measured financial impacts from training (Bassi, Benson, Cheney, 1996). It seems that many organizations persist in believing that participant reactions are valid and reliable indicators by which to audit the effectiveness of training.

These statistics are alarming since recent literature has focused on critiquing Kirkpatrick's (1994) evaluation model which advocates evaluating interventions at four levels: reaction, learning, behavior change, and results (Kaufman & Keller, 1994; Holton, 1996; Phillips, 1995). Even more importantly, research has consistently informed us that there is little correlation between reaction and learning, and even less between reaction and performance (Alliger, Tannebaum, Bennett, Traver & Shotland, 1997; Alliger & Janak, 1989; Dixon, 1990; Noe & Schmitt, 1986; Warr & Bunce, 1995). The consensus among many in HRD is that "evaluation as currently conceptualized, practiced, and researched, is not sufficient for answering many of the questions trainers and others have about the effectiveness of organizations' training and development efforts" (Preskill, p. 53, 1997).

One glaring shortcoming of the current conceptualization of evaluation is that it neglects important aspects that influence HRD outcomes of learning, performance, and organizational results (Holton, 1996). Without this kind of pertinent information, HRD professionals continue to narrowly understand evaluation of training and continue to make costly decisions based on reaction-level information only. The purpose of this research is to expand notions of training criteria and evaluation by exploring the relationship between learner utility reactions and predictors of learning transfer.

Review of Literature

Reaction Measures

Discussion about the insufficiency of reactions measures has been prevalent in the literature since the late 1980's. Noe and Schmitt (1986) determined that trainee satisfaction was not related to learning, and learning was not related to behavior change. Dixon (1990) found no significant relationship between trainee **perceptions** of job relevance, amount learned, enjoyment, or instructor skillfulness and subjects' post-test scores. Warr and Bunce determined that there was no association between reported enjoyment and learning scores (1995). Strong corroboration is found in a recent meta-analytic study conducted by Alliger, et al (1997). An analysis of 34 studies

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yielding 115 correlations found little correlation between reactions of any type and immediate learning and concluded that "reaction measures cannot be used as surrogates of other measures" (p. 353).

Transfer of Learning

Transfer of learning is defined as the degree to which trainees apply knowledge, skills, behaviors, and attitudes learned in training to their jobs. Although there are multiple definitions of transfer of learning, it is generally agreed upon that transfer involves the application, generalizability, and flexibility of new knowledge/skills.

Research during the last 10 years has demonstrated that transfer of learning is complex and involves multiple factors and influences (Noe, 1986; Baldwin & Ford, 1988; Rouiller & Goldstein, 1993; Ford & Weisbein, 1997; Holton, Bates, Ruona & Leimbach, 1997,1998). Three categories of factors that are thought to impact transfer of training include (1) trainee characteristics, including ability, personality, and motivation; (2) training design, including a strong transfer design and relevant content; and (3) work environment, including work processes, support systems, and incentives (Baldwin & Ford, 1988).

These factors are currently being studied as critical components of the transfer system—the network of factors affecting transfer of learning to performance. The Learning Transfer System Inventory (LTSI) has been developed to operationalize the learning transfer system (LTS) and develop a valid and generalizable set of transfer system scales (Holton, Bates & Ruona, 1998a; Holton, Bates, Ruona & Leimbach, 1998b). The instrument's conceptual frame (see Figure 1) is derived from Holton's (1996) proposed evaluation model and includes what are believed to be a comprehensive set of factors that can facilitate or inhibit transfer of learning to workplace performance.

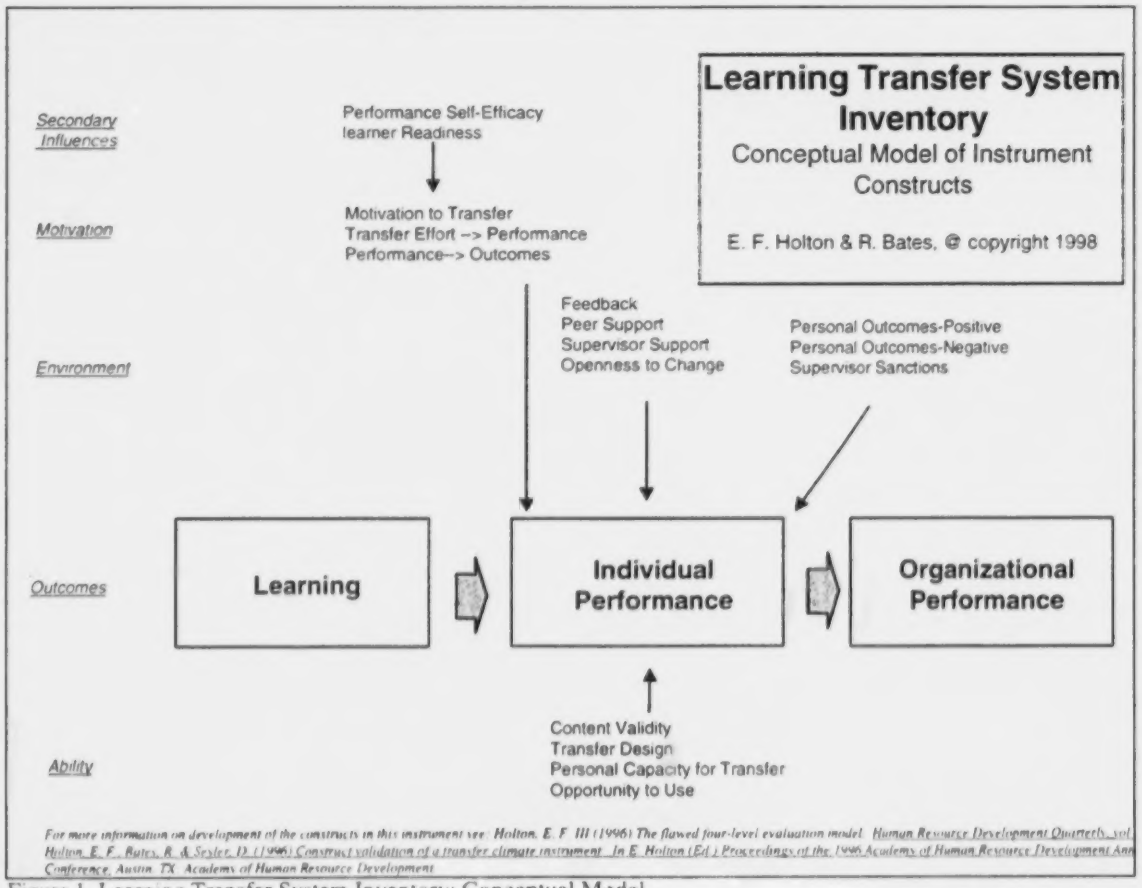
Learning Transfer System Inventory
Conceptual Model of Instrument Constructs
E. F. Holton & R. Bates, © copyright 1998
Secondary Influences
Performance Self-Efficacy
learner Readiness
Motivation
Motivation to Transfer
Transfer Effort --> Performance
Performance--> Outcomes
Environment
Feedback
Peer Support
Supervisor Support
Openness to Change
Personal Outcomes-Positive
Personal Outcomes-Negative
Supervisor Sanctions
Outcomes
Learning
Individual Performance
Organizational Performance
Ability
Content Validity
Transfer Design
Personal Capacity for Transfer
Opportunity to Use
For more information on development of the constructs in this instrument see: Holton, E. F. III (1996) The flawed four-level evaluation model. Human Resource Development Quarterly, vol.
Holton, E. F., Bates, R. & Ruona, W. (1996) Construct validation of a transfer climate instrument. In E. Holton (Ed.) Proceedings of the 1996 Academy of Human Resource Development Ann
Conference, Austin, TX: Academy of Human Resource Development.

Figure 1. Learning Transfer System Inventory: Conceptual Model

This conceptual framework of factors affecting transfer of learning provides a unique framework by which to further understand participant reactions and how they relate to outcomes of learning, individual performance, and organizational performance.

Research Questions

The purpose of this study is to compare participant utility reaction information to information about other elements of the transfer system. Specifically, two research questions guided the research:

1. How were participant utility reaction ratings associated with ratings on predictors of learning transfer?
2. What percent of the variance in motivation to transfer learning is explained by participants' utility reaction ratings?

Methodology

Instrumentation

Participants were asked to complete The Learning Transfer System Inventory (LTSI) at the end of training programs they attended. This instrument, which has been recently construct-validated (Holton, Bates, Ruona & Leimbach, 1998a), consists of a pool of 69 items designed to measure 16 factors hypothesized in the HRD Research and Evaluation Model (Holton, 1996) shown in Figure 1. In previous research (Holton, et al, 1998b) the LTSI has been shown to reliably measure all 16 factors hypothesized in the LTS model. All factors are measured by at least three individual items. Cronbach alpha reliability coefficients were acceptable for early stage instrument development, ranging from .63 -.91, with all but two greater than .70.

At the same time, participants were also asked to complete a five-item reaction scale designed to measure participants' reactions to the training program. The items on this scale addressed primarily utility reactions. Utility reaction measures "attempt to ascertain the perceived utility value, or usefulness, of training for subsequent job performance" while affective reactions consist of items that explore participant satisfaction or liking of the course (Alliger et al, 1997, p. 344). Alliger's research suggests that utility reactions are more closely associated with transfer than affective reactions and, therefore, we chose five reaction items from a pool of items commonly applied to evaluate corporate training programs. These items were:

- My time was well spent;
- The session objectives were met;
- I would recommend this program to others in my organization;
- I learned something I can apply immediately to my work;
- The course provided me with new ways of thinking about my job.

Data from the utility reaction scale, combined with data measuring participants' perceptions of the transfer system factors, provides additional evidence about the role of reaction information in ascertaining the potential effectiveness of training and development interventions.

Sample

The LTSI was administered to 1,616 people in a wide variety of organizations and training programs. The sample was deliberately chosen to be as heterogeneous as possible (see Table 1). It includes respondents from a variety of industries including: shipping, power, computer/precision manufacturing, insurance, chemical, industrial tool/construction, non-profit, and municipal and state government. The municipal and state government classes were offered by a central training organization, so the classes included representatives from a wide variety of agencies and functions.

A wide range of employees attended various training programs. These included secretaries, manufacturing operators, technicians, engineers, managers, professionals, sales people, and law enforcement personnel. The training programs covered a wide variety of topics including sales, safety, volunteer management, project

management, computer and technical skills, quality science, emergency medicine education, and various classes related to leadership, mid-management, and supervision.

Analysis-*Research Question #1*

Pearson product-moment correlations were used to explore the linear association between the utility reaction scale and each of the sixteen constructs measured by the LTSI.

Analysis-Research Question #2

Examining participant utility reactions within the context of other transfer of learning factors can be tested in a number of ways. In this study, analysis was conducted to determine if participant utility reactions added any predictive power after other transfer of learning factors were taken into consideration. This is an appropriate test in that participant utility reactions are the most general, and therefore, hypothesized as the least useful in diagnosing barriers to transfer. The test was conducted by using a forced entry method. The LTS factors were all entered into the regression equation prior to the entry of participant utility reactions. This allowed us to determine if the participants' utility reactions can add to the multiple-R after other, more specific transfer of learning factors, were already accounted for.

Table 1

Selected Demographics

Organization Type	n	%	Training Type	n	%
For Profit Organization	432	26.7	Technical Skills	544	33.7
Non-profit Organization	192	11.9	Sales/Cust Serv	434	26.9
Public Training Classes (mostly for-profit)	316	19.6	Volunteer Mgt.	192	11.9
Government (State = 175 and local = 501)	676	41.8	Leadership/Mgt.	175	10.8
			Professional Skills	80	5.0
			Supervisory Skills	67	4.1
			Clerical	62	3.8
			Communication	44	2.7
			Computer	18	1.1
TOTAL	1616	100.0	TOTAL	1616	100.0

Results

Research Question #1: Correlations Between Transfer of Learning and Participant Utility Reaction Table 2 shows the Pearson product-moment correlations between the Participant Utility Reactions and the sixteen LTSI factors. All correlations were significantly different from zero ($p < .001$ for all correlations) and ranged from a high of $r = 0.619$ (Transfer Design) to a low of $r = -0.156$ (Manager Sanctions).

Table 2

Correlations Between Participant Utility Reactions and Transfer of Learning Factors

	Participant Utility Reactions	Sig.
Transfer Design	.619	**
Motivation to Transfer	.554	**
Transfer Effort	.480	**
Perceived Content Validity	.456	**
Performance Self-Efficacy	.358	**
Opportunity to Use Learning	.349	**
Outcomes Expectations	.303	**
Peer Support	.277	**
Feedback	.260	**
Personal Capacity for Transfer	.211	**
Supervisor Manager Support	.211	**
Learner Readiness	.167	**
Personal Outcomes – Positive	.121	**
Personal Outcomes – Negative	- .091	**
Resistance/Openness to Change	- .115	**
Manager Sanctions	- .156	**

** = $p < .001$

The strongest correlations appeared to be with the Motivational and Ability antecedents to the training event. All of the Environmental factors were in the lower half of the correlation set. Among the Ability factors, the strongest correlations were with Transfer Design (r = 0.619), and Content Validity (r = 0.456). Among the Motivational factors the strongest correlations included Motivation to Transfer (r = 0.554), Transfer Effort-Performance Expectations (r = 0.480), and Performance Self-Efficacy (r = 0.358).

Research Question #2: Predicting Motivation to Transfer. A forced entry multiple regression procedure was used in which Participant Utility Reactions were entered last after all the transfer of learning factors. Participant Utility Reactions were forced to enter the predictive equation last, after all of the variability associated with the Transfer of Learning constructs was accounted for. The results of this analysis are presented in Table 2. Results indicate that Participant Utility Reactions had a small, but significant impact on the ability to predict Motivation to Transfer. Entry of Participant Utility Reactions raised the multiple-R from R = .641 (without Participant Utility Reactions) to R = .679 ($F = 87.88$, $p < .001$).

Table 3

Multiple-Regression Results of Transfer Climate Factors Predicting Participant Utility Reactions

	R	Adjusted R^2	F
Transfer of Learning Factors	.641	.405	76.98*
Participant Utility Reactions	.679	.460	87.88*

* = $p < .001$

Addition of Participant Utility Reactions to the regression equation increased the amount of variability accounted for by .038 which was a significant increase in R^2. Table 4 shows the Beta-weights for each factors. Step 1 results show the standardized beta coefficients of the LTSI factors before entry of participant utility reactions. Step 2 results show the Beta coefficients after the entry of participant utility reactions.

Table 4

Factor Betas From Multiple-Regression of Transfer Climate Factors Predicting Motivation to Transfer

	Step 1 Results		Step 2 Results	
	Standardized Beta	t	Standardized Beta	t
Learner Readiness	.010	0.47	.013	0.64
Personal Outcomes – Positive	.224	9.49*	.202	8.91**
Personal Outcomes – Negative	.105	4.82**	.062	2.91**
Peer Support	.099	3.92**	.096	3.97**
Supervisor Manager Support	.046	2.02*	.045	2.09*
Manager Sanctions	.005	0.219	.001	0.03
Perceived Content Validity	.025	4.19**	.069	2.66**
Transfer Design	.148	5.65**	.023	0.85
Opportunity to Use Learning	.008	0.346	.004	0.17
Transfer Effort	.254	10.01**	.209	8.48**
Outcomes Expectations	.113	4.10**	.085	3.21**
Resistance/Openness to Change	.112	4.61**	.082	3.50**
Performance Self-Efficacy	.082	3.51**	.057	2.55*
Feedback	.007	0.29	.009	0.36
Participant Utility Reactions	NA	NA	.306	11.92**
Factors Excluded from equation				
Personal Capacity for Transfer				

** = $p < .01$, * = $p < .05$

Despite being the final factor entered, Participant Utility Reactions had the strongest Beta of all factors entered into the equation (Beta = .306, t = 11.92, $p < .01$). In addition, the entry of participant utility reactions resulted in Transfer Design being eliminated as a significant contributor to the regression analysis. The standardized beta for Transfer Design was reduced from 0.148 ($t = 5.65$, $p < .01$) to 0.023 ($t = .853$, ns). This is not surprising given the strong correlation between Transfer Design and participant utility reactions shown in Table 2 and suggests a great deal of shared variance between participant utility reactions and Transfer Design.

Discussion

Forcing participant utility reactions to be entered last into the regression equation limited the opportunity for them reactions to contribute to the regression analysis. Despite this, Participant Utility Reactions still contributed significantly to predicting Motivation to Transfer. While the increase in the multiple-R was relatively small, it was a significant increase in the predictive power of the model. It should be noted that the large sample size made for a rather robust analysis with sufficient statistical power to detect even small effects. Perhaps if this study were replicated on a smaller sample, participant utility reactions may not contribute significantly to the regression equation.

Despite the limitations, these results raise two critical issues. First, what could Participant Utility Reactions contribute that is not accounted for in the other Transfer of Learning constructs? The results, while not providing direct evidence, hint at a possible answer. The correlational analysis indicates that Participant Reactions are more closely associated with Ability and Motivational constructs (including Secondary influences) than with the Environmental constructs. Ability and Motivation are largely antecedent constructs, representing what the participant and the program bring to the learning process.

In contrast, perceptions of the Environment constructs, while formed earlier, are largely directly experienced after a training program. It may be that Participant Utility Reactions are associated with yet un-conceptualized antecedent constructs associated with transfer of learning or that utility reactions serve some sort of moderating role with HRD outcomes of learning and performance, which has been proposed in earlier transfer of learning literature (Holton, 1996; Noe & Schmitt, 1986). Further research might help clarify this and ultimately strengthen HRD's understanding of evaluation and transfer. However, it should also be noted that the correlation analysis does suggest that there is a great deal of shared variance between Participant Utility Reactions and all of the LTSI factors. It may be that participant utility reactions operate as a kind of summary judgment, particularly for the Ability factors. However this summary judgment would have limited utility in diagnosing problems with learning transfer (Holton et al, 1998).

The second issue raised by this analysis concerns the value of Participant Utility Reactions given the small contribution to the prediction of Motivation to Transfer. Participant Utility Reactions are broad, vague, and therefore, not a very useful measure for identifying and diagnosing the causes of transfer (or lack thereof). Their relatively small contribution to the overall predictive power of transfer motivation suggests that utility reaction measures serve little purpose in the analysis of learning outcomes. While Participant Utility Reactions may appear to be a simple substitute for the general characteristics of Ability and Motivational constructs, their usefulness is limited in predicting whether or not learning will transfer to the work place or in determining facilitators/barriers to transfer.

Finally, this analysis showed the degree to which Participant Utility Reactions contributed to predicting motivation to transfer learning, not actual performance outcomes. Given previous research cited above, we would expect Participant Utility Reactions to have even less of an impact on actual performance. While we can not assess utility reactions' impact on learning in this analysis, these results clearly suggest that they are unlikely to have much, if any, impact on transfer of learning to job application.

This research contributes additional evidence that directly speaks to the validity of utility reaction information, given knowledge of other predictors of learning transfer and HRD outcomes. The evidence provided here helps us to better understand what is involved in the transfer of learning process, thus, helping HRD professionals to steer resources towards those things that can actually improve the effectiveness of an organization's performance improvement efforts. It is hoped that this will further inform HRD professionals in their use of various frameworks for categorizing training criteria as well as provide added theoretical undergirding for the mov ment towards new approaches to training evaluation.

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Mixed Methods: The Value of the Qualitative Perspective in Transfer of Training Research

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Qualitative data can often help elaborate the meaning of statistical findings and provide insight on causal factors. This study lends support for a mixed method approach in transfer of training research by demonstrating how a qualitative method, the analysis of data from semistructured interviews using conceptually ordered matrices, can illuminate quantitative data gathered from the same setting.

Keywords: Transfer, Qualitative, Mixed Methods

Mixed method evaluation designs continue to generate debate in the research literature (Greene & Caracelli, 1997). The purists (e.g., Guba & Lincoln, 1989) argue against mixing quantitative and qualitative methods, while others (e.g., Patton, 1988) support a more pragmatic approach, viewing methodological decisions, including the use of mixed designs, to be dependent on the content and needs of the study.

The purpose of this paper is to lend support to the pragmatic view by providing an example of how a qualitative method, the analysis of data from semistructured interviews through conceptually ordered matrices (Miles & Huberman, 1994), can illuminate quantitative data gathered from the same setting in a dissertation study (May, 1998). A brief summary of the research problem and questions appears first. This is followed by a synopsis of the methodology and findings for both the quantitative and qualitative components of the study, with emphasis given to the qualitative process. The paper then provides some examples of insights gained from the qualitative data and concludes with a discussion of the implications for HRD research on transfer of training.

Research Problem and Theoretical Model

The research problem deals with *transfer of training*, defined as the effective and continuing application of newly acquired skills on the job (Broad, 1997; Ford & Weissbein, 1997). Enormous investments in training are believed to be largely wasted because of inadequate transfer, especially in the "soft skills" area of management development such as interpersonal communication and negotiation skills training (Georges, 1996). A widely respected theoretical model for analysis of the transfer problem (Baldwin & Ford, 1988) suggests that transfer is a function of three factors: trainee characteristics, learning retention, and work environment. Learning retention, in turn, is impacted by training design and also influenced by trainee characteristics and the work environment. The transfer equation is considered to be systemic and complex, with many variables affecting the ultimate generalization and maintenance of newly learned skills.

A number of recent studies have begun to isolate important variables in the components of the Baldwin and Ford model (see Ford & Weissbein, 1997). However, examination of the transfer of training literature reveals continued research gaps. Of particular concern is the lack of current research on the training design component *conditions of practice*, especially within the delivery method of behavior modeling training. This is significant because behavior modeling is currently the primary training design for delivery of supervisory interpersonal skills training in business today (Russ-Eft & Zenger, 1995) and the practice component has been called "the crux" of the behavior modeling process (Pescuric & Byham, 1996, p. 29). Yet, as noted by Salas, Cannon-Bowers, and Kozlowski (1997), there is little empirical research on the mechanisms and principles of skill practice in relation to both learning and transfer in a field environment. This is especially true for the more complex interpersonal skills that include significant cognitive components such as active listening and negotiation skills (Stevens & Gist, 1997).

Research Questions and Hypotheses

This study therefore undertook to build a theory-based practice protocol and test its effect on learning and transfer of a complex interpersonal skill taught in a behavior modeling training program in a field setting. Three research questions were addressed: (a) What theoretical framework can guide the development of a practice protocol for

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learning a complex interpersonal skill, (b) how can an effective practice protocol be operationalized; that is, what tools and systems are needed to make the protocol effective in the workplace, and (c) given equal practice, what is the effect of the practice design on learning and transfer when compared to traditional behavior modeling practice sessions?

Anderson's (1983; 1995) ACT* theory of cognitive architecture provided the theoretical basis for the practice protocol. Anderson's theory proposes that memory is composed of three major structural components and their interlinking processes: working memory, declarative memory, and production memory. Given the ACT* theory of cognitive structure, skill acquisition is believed to proceed through three stages: (a) a cognitive stage, in which a description of the procedure is learned (declarative knowledge); (b) an associative stage, in which the facts are compiled and integrated with a method for performing the skill (procedural knowledge); and (c) an autonomous stage, in which the skill becomes more fluent and automatic. It is this third stage that is crucial for competent performance (Howell & Cooke, 1989), where component skills become compiled and automated so that conscious process capacity can be devoted to the more demanding aspects of complex tasks. Goldstein (1993) described such automaticity as a "crucial point in instructional theory" (p. 110). According to Anderson, the critical factor that determines both the accessibility of declarative knowledge and the performance of procedural knowledge is the strength of the encoding of this knowledge in memory, which basically reflects the amount and type of practice.

Given this theoretical framework, a literature review, which included both historical behaviorist research on the conditions of practice and recent research on practice in the fields of cognitive and educational psychology, yielded five practice design principles:

1. Develop a criterion checklist that clearly describes the key behaviors that make up each component skill set. Arrange the behaviors on the checklist in order of difficulty within each component (Blank, 1982).
2. Use progressive part-task role-play practice of the component skill sets to develop and compile procedural knowledge. Then integrate the component skills with guided whole task role-play practice (Proctor & Dutta, 1995).
3. In the whole-task practice, practice to mastery (one errorless performance of all criteria) then continue practice to a minimum of 50% overlearning (Driskell, Willis, & Copper, 1992).
4. Use video feedback to provide knowledge of results after each practice round (Ilgen & Moore, 1987; Rothstein, 1980).
5. Use reciprocal teaching techniques to scaffold learners, prompt elaboration for memory retention, and foster use of higher level cognitive strategies (Palincsar & Brown, 1984).

These principles were synthesized into a practice protocol, termed a *mastery practice lab*, and implemented in a field environment to test the following hypotheses: trainees participating in the mastery practice design, when compared to trainees participating in the traditional workshop practice design, will have (a) higher cognitive retention of the listening model, (b) better performance on behavioral demonstrations through role-play, and (c) greater transfer of behavior as measured by perceptions of coworkers.

Quantitative Component: Methods and Results

Method

Participants in the study were 38 first line supervisors and managers at a consumer product manufacturing plant located near Atlanta, Georgia. The training program focused on active listening skills. The study employed a pretest-posttest control group design with participants randomly assigned after a basic introductory workshop on listening skills to one of two conditions: mastery learning lab (test group) and conventional workshop practice (control group). Dependent measures included knowledge retention, behavioral skill demonstration, and far transfer to the workplace. Knowledge retention was measured by a free-recall test. Behavioral skill demonstration was evaluated by rating videotaped role-plays against a criterion checklist. Far transfer was assessed by use of the Listening Practices Feedback Report (LPFR), a multirater 360-degree survey instrument which has been found to be a reliable measure of listening in the workplace (Emmert, Emmert, & Brandt, 1994).

Results

A one-way analysis of covariance (ANCOVA) was conducted on each dependent measure to determine whether the posttraining results for the two groups differed after adjustments were made for pretraining differences. The ANCOVA procedure found a significant difference between groups for the two learning measures, indicating the mastery practice condition made a positive difference in knowledge retention and the ability to demonstrate the key listening behaviors. However, in terms of practical significance, learning in both groups fell short of acceptable levels. In regard to the transfer measure, there was no significant difference between groups and no significant change from pretraining conditions.

Qualitative Component: Methods and Results

Method

At the conclusion of the study, semistructured interviews were conducted with 36 of the 38 participants to obtain qualitative data on the dynamics of the learning and transfer process related to the two training conditions. The interviews were approximately 45 minutes in length and were conducted during a final debriefing that included a review and discussion of the individual's performance data in comparison to group averages. Given the exploratory nature of the study, particular emphasis was placed on understanding the participants' views of the practice experience during training, the nature of their behavior changes, and the factors that may have influenced their efforts to transfer the training to the workplace.

The interview responses to each question were coded and categorized according to underlying concepts. Conceptually ordered displays (Miles & Huberman, 1994) were then constructed for each question to organize themes within a 2 x 3 x 2 matrix: (a) by group (mastery or conventional), (b) by performance on a composite index of the dependent measures (upper quartile, middle range, or lower quartile), and (c) by relevant perspective (e.g., personal or environmental). A concept mentioned by three or more respondents across all groups and performance levels was considered to be a possible conceptual theme and was included in the appropriate matrix block along with the number of respondents contributing to that theme and representative quotations from the interviews. Two examples of the resulting conceptual matrices are shown in Tables 1 and 2.

Results

The posttraining interview data revealed several themes across both groups and across all performance levels, which helped in the interpretation of the quantitative results. These themes were:

1. the issue of poor execution of the role-play practices during the conventional workshop,
2. the shallow depth of learning, with on-the-job application restricted generally to the simpler aspects of the listening model,
3. the abundance of barriers, both personal and environmental, that limited application of the listening skills in the workplace, and
4. the need for on-going reinforcement after the training.

In addition, only the participants in the high performance group mentioned one unique theme: the desire to learn. It is significant that every participant in the high performance group (N = 8) spontaneously mentioned and provided examples of their personal desire to learn, while this trait was never mentioned by any of the participants in the middle range or low quartile performance groups.

Examples of the Value of the Qualitative Perspective

Kraiger, Ford, and Salas (1993) note that there is an important difference between the concepts of training evaluation and training effectiveness. Training evaluation focuses on whether training leads to the desired level of proficiency. Training effectiveness, on the other hand, deals with the broader issues involved in understanding why training did or did not lead to the desired level of proficiency. Qualitative data, when combined with quantitative data, can often help elaborate the meaning of statistical findings and provide insight on causal factors (Swanson,

Watkins, & Marsick, 1997). For example, the results on the far transfer measure in this study were disappointing. There was no significant change in performance on the LPFR listening scores from pretest conditions for either group. While the level of learning and even the management of the survey process itself may have contributed to this result, the qualitative data helped provide valuable and practical insights on why transfer may not have occurred. Two examples will be provided here, drawn from Tables 1 and 2, which lend support to the importance of work environment factors and personal characteristics in the Baldwin and Ford (1988) model.

Work Environment Factors

An examination of the organizational transfer climate literature (May & Reilly, 1997) revealed that the climate factors which support or hinder transfer tend to cluster into two related dimensions: one social or interpersonal in nature and the other reflecting structural factors in the organization. The interviews conducted in this current study did not reveal any significant issues with the social factors such as supervisor or peer interaction in the organization. However, there were problems with the structural factors in the organization that may have hindered transfer.

The structural dimension of transfer climate includes such factors as work flow and job design (Ford, Quinones, Sego, & Sorra, 1992) and situational constraints such as the lack of resources, including information, tools, supplies, and time (Tziner, Haccoun, & Kadish, 1991). In addition, there are cultural factors that communicate the extent to which a company values and emphasizes learning as part of everyday work life (Tracey, Tannenbaum, & Kavanagh, 1995). The interview results from this current study provide additional evidence for the powerful influence of these structural factors in the work environment and how they can create a negative transfer climate (see Table 1). For example, there was a pervasive "time bind" for almost all of the participants, related, in part, to their large number of direct reports (mean = 28) and also to constant work crises stemming from the on-going introduction of new work processes and production equipment. The arrangement of workspace, which required supervisors to share office space, also contributed to a high level of distractions. This simply was not a work climate conducive to application of a counseling type listening model taught in the workshop. It is clear from the posttraining interviews that training alone, even with a robust practice design, is not a sufficient means of improving and maintaining performance. This qualitative data therefore supports the need for a sufficiently valid and reliable measure of transfer climate. Such a measure could be used as a diagnostic tool to identify when an organization is ready for a training intervention and could provide information to guide pretraining interventions aimed at increasing training effectiveness. Holton and his colleagues (Holton, Bates, & Leimbach, 1998) have recently developed a transfer climate instrument, called the Learning Transfer Questionnaire (LTQ) which appears to meet this need.

Trainee Characteristics

A number of individual characteristics have been empirically linked to transfer, including cognitive ability and aptitude (Ford et al., 1992), locus of control (Quinones, Ford, & Teachout, 1995), and self-efficacy (Gist, Stevens, & Bavetta, 1991). One recent study appears to be the first to apply a personality dimension termed *conscientiousness* to the study of transfer. Stewart, Carson, and Cardy (1996) found a significant correlation between conscientiousness and supervisor performance evaluations of self-directed customer service behavior. Conscientiousness includes facets of organizational skills, persistence, need for achievement, and self-discipline (McCrae & Costa, 1989). The posttraining interviews in this current study revealed a similar theme, termed *desire to learn*, that seems related to the construct of conscientiousness (see Table 2). It was significant that all 8 of the top quartile performers talked about an innate desire to learn while no other interviewees mentioned this factor. These performers exhibited this desire by taking steps on their own initiative to improve their learning, such as posting the listening model in their work area, sharing with their subordinates, and periodically reviewing the training material without prompting. Thus, the construct of conscientiousness and other related personality factors may be a significant consideration in the study of transfer. It seems reasonable to expect that personality factors such as conscientiousness and openness to experience might not only be predictive of future job performance but also relate to an individual's motivation to learn, learning strategies, skill acquisition rates, and training transfer (Ford & Weissbein, 1997). Advanced diagnosis of relevant personality variables could lead to tailored practice designs and posttraining support systems customized to individual needs.

Table 1. Example Conceptual Matrix: "Factors that Prevent Effective Listening"

Group by Performance Rank (N)	**Personal** **Theme (# mentioning): "Example quotes"**	**Environmental** **Theme (# mentioning): "Example quotes"**
Upper Quartile Performance		
Mastery (5)	Biases (4): "My personality; I get offended when person is inflexible." "Sometimes don't want to hear other person's priorities." "Have a hard time with people who have 'attitudes'." "Got ticked; didn't listen."	Time Bind (3): "Behind on production; pressed for time." "Pushed for deadlines, start cutting corners, getting short with people." "When in hurry, on way to meeting, hard not to blow off."
Conventional (3)	Biases (1): "More an internal issue – who other person is, what level."	Distraction (2): "Lots of things going on; hard to concentrate and focus." "Distracted – office we're in; people coming in and out; telephones ringing."
Middle Range Performance		
Mastery (10)	Personal Worries (2): "Personal worries prevent me from focusing."	Time Bind (9): "Fast paced environment." "Deadlines." "Too much on plate." "Completely overwhelmed." "Hectic." "Pressing time issue." Work Crisis (2): "Crisis on the production floor." "Confusion, chaos – like when machine goes down." Distraction (1): "Phone calls, people coming in office."
Conventional (10)	Biases (5): "Judgmental of 'whiners'." "Depends on who person is." "Some people just want attention." Personal Worries (1): "Lots of issues outside the job – single parent."	Time Bind (4): "Always juggling bunch of balls." "Reports, meetings, people constantly wanting information." "Time constraints." "43 direct reports; can't even take time to write things down." "Pace!" Work Crisis (1): "Pressure, problems – such as equipment down." Distraction (3): "Interruptions constant." "Phone ringing." "People in and out."
Lower Quartile Performance		
Mastery (2)	Biases (1): "When people are belligerent."	Distraction (2): "Have someone in my office; other people trying to get my attention." "Soon as I walk out to do something, 2 or 3 people approach me."
Conventional (6)	Biases (2): "Tone of voice can turn me off." "No patience with bullshit." Personal Worries (1): "On 3rd shift; wrong for me – people dragging, single parents."	Time Bind (1): "Someone catches me on way out the door to meeting; rushed." Work Crisis (1): "Depends on number of fires trying to put out." Distraction (1): "Tremendous amount of interruptions."

Table 2. Example Conceptual Matrix: "Participants' Final Thoughts"

Group by Performance Rank (N)	**Theme (# mentioning): "Example quotes"**
Upper Quartile Performance	
Mastery (5)	Desire to Learn (5): "Difference for me – real desire to learn; willing to try." "Have desire to improve." "Made mnemonics out of model; posted model in office." "Put model on my filing cabinet by my desk." "Put model on my bulletin board; shared with my people what I'm working on." Need for Reinforcement (1): "Like getting together each month during research project; come back and refresh; makes me review." Workload (1): "What happens to most, go back to work, so much on plate, decisions to be made – forget about training."
Conventional (3)	Desire to Learn (3): "I do a lot of study on my on; feel responsibility to progress; posted model where could see on continuing basis." "What works for me, must go out and do; apply soon afterward." "Want to do it right." Need for Reinforcement (1): "Coming back from time to time – pretraining, workshop, post video, interview – all reinforcement."
Middle Range Performance	
Mastery (10)	Need for Reinforcement (5): "Has to be subsequent follow-up; refreshers to reinforce; otherwise won't retain." "Multiple meetings helpful." "Follow-up – meeting 3-4 times; reinforced vs. 'flavor of the month' type thing." "Follow-ups forced me to review." "Came to workshop, left, went back to office, tossed workbook on pile; would not have throught about it again if we did not have the follow-up appointments." Workload (2): "Don't know how could have crammed more in – listening, team concepts, SOPs, safety, violence in the workplace." "Training competing with so many things."
Conventional (10)	Need for Reinforcement (5): "Must keep in front, on going; refreshers over period of time." "Follow-up is key. Must revisit multiple times." "Follow-up is absolutely necessary." "Tend to put book on shelf if no follow-up / reinforcement." Workload (1): "Lots of direct reports. So much stuff coming at you."
Lower Quartile Performance	
Mastery (2)	Need for Reinforcement (1): "What's helped me in past are reinforcers – cube on the desk as reminder."
Conventional (6)	Need for Reinforcement (2): "How can we tie into reward system? All would put forth more effort. Example: Safety a joke around here until became item on evaluation." "If never bring up again, won't be used. Must have constant reminders, reinforcement, periodic refreshers." Workload (3): "Going through lots of things – overload." "Number of people reporting is important." "So damn busy. No time to do anything well. Making me crazy."

Implications for HRD Research on Transfer of Training

From a theoretical perspective, the HRD profession is still in the early stages of model building in regard to training transfer. We are seeking to conceptualize a transfer system in terms of variables and relationships that will be intellectually manageable and then examine the components with strong research designs until a valid representation of the real system emerges. Such a model can then provide a basis for effective HRD practice and prescriptive interventions. The qualitative examples in this study provide further evidence that transfer is a complex, systemic

issue and quantitative data alone will not give us the insights we need. As noted by Chen (1997), mixed methods can compensate for the inherent weaknesses of quantitative data collection in a work environment, triangulate the evaluative evidence, provide richer and more accurate understandings, and even expand the scope of the study. This study lends support to the pragmatic approach of integrating quantitative and qualitative evaluation paradigms in transfer of training research.

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Theories Supporting Transfer of Training

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The purpose of this paper is to review theories and conceptual frameworks necessary to describe three factors affecting transfer of training. This information helps HRD professionals understand why people desire to change their performance after attending a training program; what training design contributes to people's ability to transfer skills successfully, and what kind of organizational environment supports the transfer. This paper also provides HRD implementation strategies to help organizations achieve a high level of transfer.

Keyword: Transfer of Training

Today we believe that competitive success is achieved through people (Pfeffer, 1994). It follows, then, that the skills and performance of people are critical. Many organizations spend a lot of money on training, believing that training will improve employees' performance and, hence, increase the firm's productivity. In 1997, organizations with more than 100 employees are estimated to have spent $58.6 billion in direct costs on formal training. And with the inclusion of indirect costs, informal on-the-job training, and costs incurred by small organizations, total training expenditures could easily reach $200 billion or more annually (Holton, Ruona, & Leimbach, 1998). However, unsettling questions continue to be raised about the return on this investment.

There is strong consensus that acquisition of knowledge, skills, behaviors, and attitudes through training is of little value if the new characteristics are not generalized to the job setting and are not maintained over time (Kozlowski & Salas, 1997). In other words, training is useless if it cannot be translated into performance. According to Swanson (1995), for HRD to become a core business process, performance is the key. Transfer of training is a core issue with respect to linking individual change to the requirements of the organizational system. Therefore, if we believe that training truly makes a difference in organizational and individual performance, we must understand how to support transfer of training in organizations.

A Transfer of Training Model

Traditional approaches to transfer of training tend to consider it as a horizontal linkage that connects training and performance environments. A comprehensive review (Baldwin & Ford, 1988) classified the factors affecting transfer of training into three categories: (1) training inputs, including trainee characteristics, training design, and work environment; (2) training outputs, consisting of learning and retention; and (3) conditions of transfer, which focus on the generalization and maintenance of training. All three sets of training input features are seen as affecting learning and retention, which directly influence generalization and maintenance. However, the purpose of training and development is to improve performance (Swanson, 1995). Learning is of little value to organizations unless it is transferred to performance (Holton, Bates, Seyler, & Carvalho, 1997). Kuchinke (1995) also argued that learning is a means, not a primary organizational outcome. Learning is an internal behavior, whereas performance is usually a more external one. Therefore, training outputs should emphasize performance, not just learning.

Holton (1996) provided a conceptual evaluation model of training focused on individual performance. This model proposes three primary outcomes of training intervention: learning, individual performance, and organizational results. These outcomes are defined, respectively, as achievement of the learning outcome desired in an HRD intervention, change in individual performance as a result of learning being applied on the job, and results at the organizational level as a consequence of change in individual performance. Figure 1 illustrates Holton's transfer of training model that suggests three crucial factors that affect training transfer--motivation to transfer, transfer climate, and transfer design.

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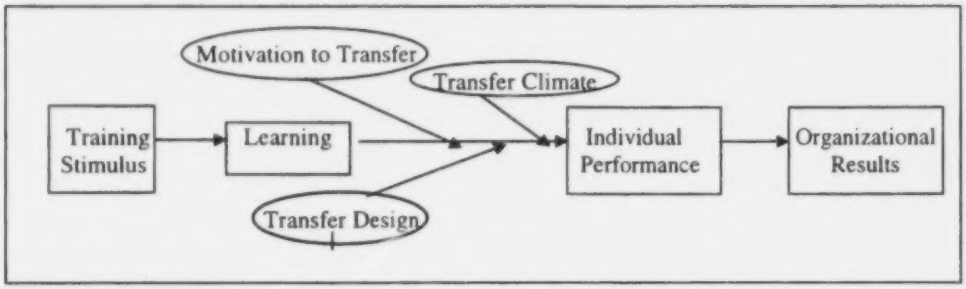
Figure 1. Holton's (1996) Factors Affecting Transfer of Training



Statement of the Problem

Individual performance is at the core of Holton's transfer of training model. Learning is expected to lead to individual performance change only when the three primary influences on transfer behavior are at appropriate levels. This model emphasizes three factors that affect implementation and transfer. However, this model needs theories and a conceptual framework to explain:

- why people desire to change their performance after attending a training program
- what training design contributes to people's ability to transfer skills successfully
- what kind of organizational environment supports people as they apply the knowledge, skills and attitudes gained in a training program to their job.

To enhance transfer of training, the HRD consultant must understand theories of evaluation and performance. Without this, it is difficult to conduct the high-quality research that leads to effective solutions to transfer-of-training problems. Therefore, to access theories and conceptual frameworks necessary to describe the three factors affecting implementation and transfer of training and the HRD implementation strategies to help organizations achieve a high level of transfer, this paper will address theories of motivation of transfer, theories of transfer design, theories of transfer climate, and conclusions and recommendations.

Theories on Motivation of Transfer

Motivation to transfer was hypothesized in Holton's (1996) model to connect learning with individual performance change. Motivation to transfer can be described as trainees' desire to use the knowledge and skills mastered in the training program on the job (Noe & Schmitt, 1986). Behavioral change will likely occur for trainees who learn the material presented in training and desire to apply that new knowledge or skills to work activities. To support the degree of transfer of training desired, it is important to understand why individuals choose to apply their knowledge, skills, and attitudes in their workplace. Several theories of human behavior exist to help us understand and predict behaviors that contribute to performance at work. They include the theories of (1) expectancy (2) equity, and (3) goal setting.

Expectancy Theory

Expectancy theory, presented by Porter and Lawler, describes the relationship between employee satisfaction and performance (cited in Moorhead & Griffin, 1992). Porter-Lawler's model includes abilities, traits, and role perceptions (how well the individual understands his or her job). At the beginning of the motivation cycle, effort is a function of the value of the potential reward for the employee (its valence) and the perceived effort-reward probability (an expectancy). Effort then combines with abilities, traits, and role perceptions to determine performance.

Performance results in two kinds of rewards. Intrinsic rewards are intangible--a feeling of accomplishment, a sense of achievement, and so forth. Extrinsic rewards are tangible outcomes, such as pay or promotion. The individual judges the value of his or her performance to the organization and uses social comparison processes to

form an impression of the equity of the rewards received. If the rewards are regarded as equitable, the employee feels satisfied. In subsequent cycles, satisfaction with rewards is influenced by the value of the anticipated rewards, and actual performance is influenced by perceived future effort-reward probabilities.

Equity Theory

Equity theory is based on the simple premise that people want to be treated fairly (Adams, 1963). Vroom (1964) recognized that individuals seek equity in their jobs; thus, job satisfaction reflects the extent to which rewards received match the rewards the employee believes should be received.

This theory rests on three main assumptions: (1) people develop beliefs about what constitutes a fair and equitable return for the contributions they make to their jobs; (2) people compare their own returns and contributions to those of others; and (3) beliefs about unfair treatment (inequity) create tension that motivates people to reduce that tension (Carrell & Dittrich, 1978). Mechanisms for reducing perceived inequities include: (1) cognitively distorting the inputs or returns/outcomes; (2) acting on the comparison with others to change his/her inputs or outcomes; (3) changing one's own inputs or outcomes; (4) changing the person with whom a comparison is made; and (5) leaving the situation where inequity is felt (Campbell & Pritchard, 1976). Equity theory predicts that individuals will choose a method of inequity reduction that is personally least costly (Adams, 1963). However, predicting which mode will be seen as least costly has proven to be quite difficult.

Goal-Setting Theory

Goal-setting theory suggests two cognitive determinants of behavior: intentions and values. Intentions are viewed as the immediate precursors of human action. The second cognitive process manifests itself in the choice or acceptance of intentions and subsequent commitment to those goals (Locke, 1968). It is the recognition that instructions will affect behavior only if they are consciously accepted that makes goal setting a cognitive theory of motivation. A goal is that level of performance the individual is trying to accomplish; it is the object or aim of behavior. According to Locke (1968), goals direct attention and action. Additionally, they mobilize effort in proportion to perceived requirements of the goal or task (Locke, Shaw, Saari, & Latham, 1981). Therefore, goal setting, like expectancy theory, may explain how and why behavior is facilitated or restrained in the pre-training, training, and post-training processes.

Impact of These Theories on Transfer Motivation

According to these theories, trainees leave training programs with different levels of motivation to utilize their learning on the job. According to Holton (1996), influences on transfer motivation fall into four categories: intervention fulfillment, learning outcomes, job attitudes, and expected utilities. All of these categories can be explained by expectancy theory, equity theory, and goal-setting theory as follows:

Intervention fulfillment. Tannenbaum, Mathieu, Salas, and Cannon-Bowers (1991) conducted a rigorous study and found that training fulfillment played a significant role in understanding training motivation. Training motivation is similar to motivation to transfer because it is a measure of the trainees' perception of the relationship between training success and future job performance (Holton, 1996). This can be explained by goal-setting theory and expectancy theory--if individuals perceive that what they learn is relevant to their goal (what they need to know) or an intervention has met their expectations and fulfilled their need for performance-related learning, they will be more motivated to transfer learning into on-the-job performance.

Learning outcomes. Tannenbaum et al. (1991) also found that performance during training had an independent relationship with post-training motivation. Expectancy theory (Vroom, 1964) suggests that individuals will be more motivated if they believe that their efforts will lead to enhanced performance. More successful learners would be expected to feel better able to perform and, therefore, more motivated to transfer. In contrast, less successful learners would be expected to be less motivated to transfer learning (Holton, 1996).

Job attitudes. Expectancy theory, goal-setting theory, and equity theory would lead us to speculate that people with high commitment and job satisfaction would be more likely to exert effort to transfer. Tannenbaum et al. (1991) also found that participants with more positive job attitudes would be expected to be more motivated to transfer learning to performance.

Expected utilities or payoffs. Clark, Dobbins, and Ladd (1993) found that trainees who perceived training to have more job and career utility were more motivated. These findings are consistent with expectancy theory, which

states that individuals will be more motivated to transfer if they perceive that their effort will lead to rewards that they value (Porter & Lawler, 1968).

Theories for Training Transfer Design

According to Holton (1996), one cause of failure to transfer is that training design rarely provides for transfer of learning. That is, cognitive learning may well occur, but program participants may not have an opportunity to practice the training in a job context or may not be taught how to apply their knowledge on the job. So, the training itself can have a direct influence on transfer of training. Thus, it is important to understand the theories that provide information about the conditions necessary to achieve positive transfer. The two major viewpoints that describe the conditions necessary for transfer are the identical elements and the principle theories.

Identical Elements Theory

The theory of identical elements was proposed by E. L. Thorndike and R. S. Woodworth (1901). According to the identical elements theory, transfer is improved by increasing the degree of correspondence between the training setting stimuli, responses, and conditions and those related factors operative in the performance setting. Holding (1965) summarized this work on transfer by detailing the type of transfer expected based on the similarity of the stimuli and responses.

Holding (1965) explained that, if the task is identical in both training and transfer, trainees are simply practicing the final task during training, and there should be high positive transfer. The second case assumes that the task characteristics--both stimuli and responses--are so different that practice on one task has no relationship to performance on the transfer task. The third case is common to many training programs. The stimuli are somewhat different in the training and transfer settings, but the responses are the same. In this case, the learner can generalize training from one environment to another. The fourth case presents the basic paradigm for negative transfer; if the response to identical stimuli in the two settings is different, negative transfer results.

Principles Theory

The principles theory suggests that training should focus on the general principles necessary to learn a task so that the learner may apply them to solve problems in the transfer environment (Goldstein, 1986). This theory suggests that it is possible to design training environments without too much concern about their similarity to the transfer situation, as long as it is possible to utilize underlying principles.

Near and Far Transfer

According to Laker (1990), there are transfer of training can be near or far. Near transfer is the application of learning to situations similar to those in which initial learning has taken place; far transfer is the application of learning to situations dissimilar to those of the original learning events. Whether one achieves near or far transfer appears to be dependent on which theory of transfer guides the development and presentation of the training program. Research reviewed by Clark and Voogel (1985) suggested that the following recommendations would increase the likelihood of near transfer:

- The more the training content and program reflect the workplace, the more successful the near transfer (Baldwin & Ford, 1988).
- The greater the specificity as to where and how the training is to be applied to the job, the more successful the near transfer (Clark & Voogel, 1985).
- The more overlearning of the task is encouraged, the more successful the near transfer (Noe, 1986).
- The more the procedural nature of the task is emphasized, the more successful the near transfer (Clark & Voogel, 1985).
- The more the application of the training is restricted to only those areas for which the trainee was prepared, the more successful the near transfer (Clark & Voogel, 1985).

Therefore, the identical elements theory influences the acquisition of near transfer. According to Spitzer (1984), near transfer would be the objective of short-term skill development that can be applied immediately to improve performance in one's present position. Near transfer would seem to be most desired when pursuing technical training (Laker, 1990), because technical training usually teaches specific behaviors and procedures applicable to the individual's current job. On the other hand, the theory of transfer through principles emphasizes the importance of creating variety and explaining the "why" that underlies what an individual is being taught. From this perspective, the following factors may hypothetically influence the acquisition of far transfer:

- The better trainees understand the underlying principles, concepts, and assumptions of the skills and behaviors they are learning, the more successful the far transfer (Goldstein, 1986).
- The more trainees practice in different contexts and use novelty in their practice exercises, the more successful the far transfer (Baldwin & Ford, 1988; Goldstein, 1986).
- The more encouragement trainees receive during training to discuss and apply the training in situations of their own choosing, the more successful the far transfer (Noe, 1986).
- The more encouragement trainees receive after training to apply the training to situations other than those for which they were trained, the more successful the far transfer (Goldstein, 1986).

Principles theory is critical to far transfer because knowledge can be abstracted and connected to new problems. If trainees can understand the principles and concepts and if they have a chance to practice exercises and apply situations in training programs to their workplace, they are more likely to apply their newly acquired skills and behaviors when they are faced with new challenges and unfamiliar problems. According to Laker (1990), far transfer might be most attractive for management development or creative problem solving as these types of training are frequently directed toward long-term goals and future positions.

In conclusion, near transfer and far transfer can be viewed as a series of goals or objectives of training and should be reflected in the content and design of training. So, it is critical to identify in advance the situations in which training is to be applied. However, if we accept the hypothesis that training strategies differ in terms of the types that facilitate near transfer versus far transfer, it is important to identify which parts of the training content and design represent specific parts of the training program.

Theories Supporting Transfer Climate

Transfer climate was described by Schneider and Rentsch as a "sense of imperative" (cited in Holton et al., 1997) that arises from a person's perception of his or her work environment. It influences the extent to which that person can use learned skills on the job. Transfer climate is seen as a mediating variable in the relationship between the organizational context and an individual's job attitudes and work behavior (Holton et al., 1998). Thus, when learning occurs in training, the transfer climate may either support or inhibit application of learning on the job. Organizational climate is at least as important as learning in facilitating transfer (Rouiller & Goldstein, 1993). The conceptual framework and theory that help to explain how organizational environment supports transfer of training are presented below.

Transfer Climate Framework

Rouiller and Goldstein (1993) offered a conceptual framework for operationalizing transfer climate; they suggested that transfer climate consists of two types of workplace cues, including eight distinct dimensions.

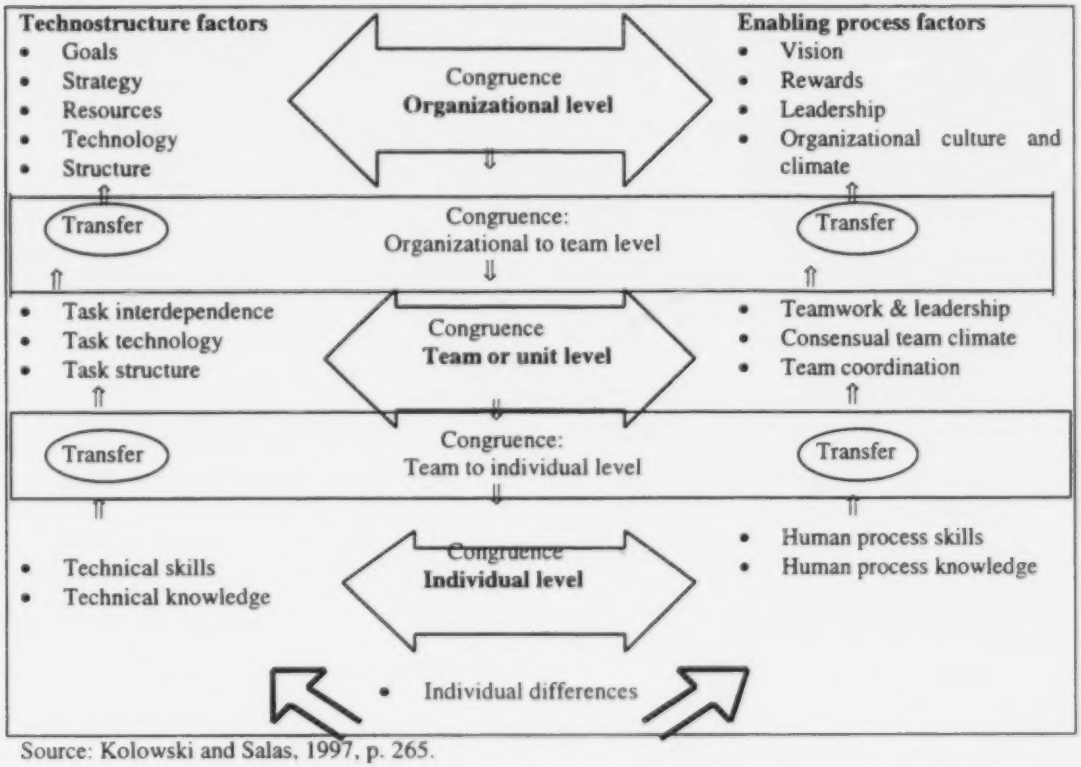
The first set of workplace cues--*situation cues*--remind trainees of opportunities to use what they have learned when they return to work. There are four types of situation cues: goal cues, social cues, task cues, and self-control cues. The second set of workplace cues--*consequence cues*--is the feedback trainees receive after they apply their knowledge, skills, and attitudes gained in the training to their jobs. There are four types of consequences: positive feedback, negative feedback, punishment, and no feedback. Rouiller and Goldstein (1993) used this framework in a study of fast-food restaurant management trainees and demonstrated that the transfer climate added significantly to the explained variance in post-training job performance. They also found that a positive organizational transfer climate appears to be important if transfer of training behavior is to occur.

Organization Theory

According to Kozlowski and Salas (1997), the need for change, the implementation of interventions, and the transfer of trained skills are embedded within the context of work team, sub-units, and organization levels. They propose an organization theory that benefits from the application of concepts drawn from systems-oriented theories. Key concepts that underline the systems framework include: organizations are open to external environmental influences, subsystem events are embedded in the larger systems context or network of relations, and it is impossible to understand complex events in systems by reducing them to their individual elements.

Organization theory enhances the identification of tangible work environment characteristics. Contextual factors exert an influence on individual responses through their perceptions of the organizational environment. This means that important, tangible, and meaningful work environment factors (structure, reward systems, or decision autonomy) are stimuli that underlie perceptions of the context. Under this analysis interpretive perceptions serve as mediating mechanisms to link salient contextual features to individual responses (Kozlowski & Farr, 1988). Three theoretical concepts or themes--levels, content, and congruence--underlie organizational context from the perspective of climate theory and are presented in Figure 2. This framework can be used to identify issues to improve the effectiveness of training implementation and transfer.

Figure 2. A Multilevel Model for Training Implemention and Transfer



Source: Kolowski and Salas, 1997, p. 265.

The dominant feature of the model is the distinction among the levels that comprise the organizational system—individual, team or unit, and organization. Second, the model distinguishes between technostructural and enabling process content which provides a means to identify relevant features that comprise contexts. Third, the framework incorporates congruence as a critical mechanism for conceptualizing configurations or alignments among key variables comprising the organizational system. It addresses the connection of variables within content domains, between content domains, and between levels. Changes in system functioning produced by training interventions are represented by arrows: (a) horizontal arrows illustrate congruence between content areas within levels, (b) central downward arrows signify congruence between higher level embedding characteristics and lower level training

targets, and (c) upward arrows within content areas represent composition processes that link training-induced change at lower levels to higher level change targets.

Training significantly benefits from integration with concepts drawn from organizational theory. According to this theory, trained knowledge, skills, and attitudes at the individual level are embedded in team or unit-level technology, coordination processes, and social system contexts, with broader contextual constraints originating at higher system levels (Kozlowski & Salas, 1997). From this perspective, preparing individuals to accept training-induced change and encouraging them to express their new capabilities in the work environment requires training that is delivered at the appropriate level and is congruent with contextual supports.

Kozlowski and Sale (1997) assert that the transfer processes in this model implicate the pre-training environment as well. If a context does not support or actively discourages the use of new skills prior to the implementation of training, it is unlikely that trainees will be motivated to learn.

Conclusions and Recommendations

All three factors reviewed--motivation to transfer; transfer design; and transfer climate--are significant to support the transfer of training and help HRD professionals to see the causes and effects of transfer of training to enhance the use of appropriate training strategies and lead to higher quality research. In practice, these theories show that systems congruence is essential for transfer. Considerable planning will be required to identify the relevant factors, processes, levels, and linkages implicated by the target training. Establishing the requisite alignments may necessitate simultaneous or phased interventions across several different factors, processes, and systems levels.

HRD professionals should encourage stakeholders of training, such as managers, trainers, and trainees, to work together to ensure that the training investment pays off through full transfer of training by:

- collaborating with key stakeholders in the organization at each step of the process to provide links to strategic goals, reinforce organizational priorities, and support performance-related factors.
- encouraging managers to provide clear performance objectives so that employees know exactly what they are expected to do. Managers should provide the necessary support (resources) for high performance and establish clear rewards for performance. They should provide prompt feedback to let employees know whether their performance meets the established standards.
- assigning high priority to learners as full stakeholders in the design and implementation of training. Groups of learners may be responsible for identifying training objectives; assessing their learning needs; developing action plans; and identifying organization-wide strategies to support full transfer to new contexts.

In addition, based on this review, the following applied research is needed within each organization:

- an examination of systems-wide components that determine whether a training program can yield meaningful change.
- an examination of contextual constraints and barriers that trainees face in applying learning in the workplace.

Finally, the transfer of training model and the review of transfer of training theories can help the HRD professional to understand that many factors affect performance change. Therefore, effective solutions to enhance transfer of training or training effectiveness will require that all of these factors be considered.

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The Role of the Survey in the Assessment of an Organization for High Performance Redesign: A Case Study

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Many companies seeking to implement high performance work systems study the interaction and fit of the social and technical systems prior to designing the new organization. This paper looks at how one company utilized a survey instrument to analyze the way the social system currently is designed and operates. The survey was developed, using the Socio-Technical Systems Model, to provide insight into five major areas: Individual Needs, Goal Attainment, Adaptation, Integration, and Long Term Development.

Keywords: High Performance, Communication, Survey for Redesign

The redesign of an organization requires extensive research and analysis of the current operating systems prior to any implementation of change. Hollister Incorporated, with the guidance of their consultants, David W. Miller and Associates, has used the Socio Technical Systems Model to study their organization to identify those areas that are working well and which areas have opportunities for improvement. This paper covers only a small part of the social analysis e.g. the survey, which provided a tremendous amount of information concerning the existing social system, how people communicate, solve problems, make decisions, know and understand goals etc. that was essential to the redesign process. A communication matrix was created that listed the available modes of communication and the key issues and areas that were identified as needing to be communicated to the plant at large (see Table 1). Each method of communication was then rated as either a primary or redundant source of information for each key element. As information was collected, it was analyzed and disseminated per the matrix. The information gathered from the survey was used not only during the redesign phase to develop a better support structure but it was also used to improve the way we communicated the news and information gathered during the entire STS analysis and redesign process.

Literature Review

High performance emerges out of the integration of the social and technical systems: how work is organized, how people are managed, how technology is used, and how all of these are linked to an organization's competitive strategy and culture. Discussions of high performance workplaces often focus on self-managing teams, quality circles, flatter organizational structures, new flexible technologies, innovative compensation schemes, increased training, and continuous improvement. Effectively managing people is an integral part of this process (Gephart, 1995).

Most companies seek to increase productivity and lower costs by improving their processes through innovations in technology but many neglect a very important key asset in their organization: the employees. Employees make an organization a successful high performance organization. Technological advances alone can increase profitability but it is the integration of the technical with the social system that creates the synergistic effect reflected in the performance measures of quality, service and cost.

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Table 1
Communication Matrix

Communication Matrix	Bulletin Boards	Display Case	HPO Info. Center	Library	One – to – One	E – Mail	Plant Meeting	Team Meeting	Mini Meeting	Supervisor & Leads	Mail	Log Books	Training Sessions	Videos	Channel H	Posters	Pay check Handouts	Cafeteria Handouts	Hollister Papers	Celebrations
HPO Work-in-Progress			P				R	P	P	R					R	R		R	R	
Design Team Meeting Schedule			P												R	R				
How People Get Involved			R		P		R	P	P	R	R		R							
Frequently Asked Questions	R		R		P		R	P	P	R									R	
HPO Articles, Books, etc.		R	R	R														R	P	
Individual Needs					P			P	P	P			P							
Plant Goals	R		R		P		P	P	P	P	R	R	R		R				R	P
Customer/Supplier Concerns			R		P		R	P	P	P						R				
Operational Decisions	R		R		P		R	P	P	P		R								
Policy/Procedures	R		R		P		R	R	P	R	R		P	R	R				R	
Training	R		R		P			P		R			P	P		R				
General Information	R		R		R		R	P	R	R	R	R		R	R	R			P	
Employee Feedback					P			P		P										
Rewards & Recognition	R	R	R		P			P	P	P	R				R				P	P
Timelines & Milestones	R	R	R		R		R	R	R	R	R				R					P

Socio-Technical systems (STS) analysis provides an alternative approach to redesigning existing organizations. Socio-Technical systems analysis focuses on problems built into the system and recognizes that even though different people in a specific job will deal with these problems differently, the problems will continue to exist until the system is redesigned. Socio-Technical systems redesign is a creative process whose purpose is to improve the quality of working life of the people in the system and increase the productivity of the system. The key is to expand the roles of people and to increase skill level and decision opportunities so as to create better careers in the workplace by pushing variance control and problem management down to the operating level of the organization.

The social system analysis attempts to examine the human systems of the organization to identify what is working well and what needs to be improved. Individuals bring their unique individual needs to the organization, both personal and professional. The social system analysis examines to what extent these needs are met and what is the resultant quality of working life as perceived by organization members. The analysis also looks at how individuals and groups interact with each other and how the organization interacts with the external environment. The process also tries to identify how the organization adapts to the external factors and how it develops its capabilities to be prepared for future challenges (Miller & Assoc., 1997).

Background

Hollister Incorporated is an employee-owned, independent manufacturer of disposable medical products with three manufacturing facilities located in Ballina, Ireland; Kirksville, Missouri; and Stuarts Draft, Virginia. For more than 75 years, Hollister has been serving healthcare professionals and the people they serve. Hollister corporate headquarters are located in Libertyville, Illinois--forty miles north of downtown Chicago. Hollister products and services are available in over ninety countries on five continents.

The Stuarts Draft facility is centrally located in the rural industrial setting of the Shenandoah Valley in Virginia. Four hundred seventy regular full time associates staff three shifts. The shifts are non-rotating, which results in the most senior employees staffing first shift. Seventy-five percent of the population is female with the majority (70%) between the ages of 25 – 40 years old. Only five percent of the population is under 24 years of age; five percent is over 55; the remaining 20% of the population are between 41– 55. The turnover rate is very low within the organization. In 1997, the total turnover rate was 9.5% of which 3.4% was due to terminations for cause or employees quitting. The remaining 6.1% were due to retirements.

Hollister is currently organized very traditionally with a plant manager, five staff managers, twelve supervisors and fourteen leadpeople. However, a redesign project is currently underway that will dramatically alter this structure. The survey data was collected and analyzed to assist in the redesign effort.

Method

There are several ways to describe and measure the effectiveness of a social system. The "As Is" Social Survey, used by the Hollister Design Team, was constructed using resource materials provided by the consulting firm of David W. Miller and Associates (1997) who facilitated and guided the design process. The basic instrument used was a modified version of one adapted from Hackman & Oldham (1975). The survey was designed to provide information about how the plant currently operates. The key areas covered in the survey were the systems for communicating, coordinating, problem solving, decision-making, and training. Questions were also included to cover how well the individual needs of the associates were being met. These questions included topics concerning the culture such as honesty and trust issues, respect and support, feedback and personal growth opportunities as well as how valued people feel within the organization.

The "As Is" Social System Survey was a plantwide survey that had a 92.8% response rate e.g. four hundred thirty six out of four hundred seventy associates completed the survey. Using the GAIL Method (Cherns & Wacker, 1978), questions were asked about goals, adaptation, integration, and long term development. In addition, questions concerning individual needs were included. The demographics of the survey included identifying each department by number and shift (Table 2).

The survey was conducted over a two-week period. Each supervisor was notified of the date and time selected for his/her group and was asked to announce and post the information. Each group was allotted thirty minutes to complete the survey. The times were scheduled directly after each group's break or lunch period and were held in the training rooms in order to emphasize the importance of the data being gathered, to minimize time away from the production floor and to reduce distractions. For all associates on leave of absence, vacation or out sick, a survey was mailed to their homes with a cover letter stating the purpose and importance of their responses. A two-week deadline was placed on gathering the information.

Using Approach, a database computer program, in the operating system of Windows 3.1, a program was created to input all of the information from the surveys. Data were compiled, sorted and graphed to aid in the analysis. All graphs were created using the spreadsheet program, Lotus 1-2-3. The upper and lower control limits were manually chosen to provide a realistic view of the data. Any value above 4.50 (the upper limit) which translates to 87% of the time, was categorized as something working well. Any value below 2.5 (the lower limit) which translates to 37% of the time, was viewed as something that definitely needed attention. Trends, potential problems, and opportunities were then identified from the analysis of the data.

Table 2

Department and Shift Profile

GROUP NAME:	DEPT.	SHIFT 1	SHIFT 2	SHIFT 3
Plant Mgr. Group	810	2	0	0
Production Mgr. Gr.	871	5	0	1
Human Resources	840	2	0	0
Materials Group	861	14	0	0
Engineering	845	12	1	0
Building & Grounds	855	9	0	0
Shipping	863	16	6	0
Receiving	865	2	1	0
Machine Shop	859	3	1	0
Ident-A-Band	881	13	0	0
Wound Care	891	26	17	0
Skin Barrier	892	45	25	23
Machine Repair	853	13	11	1
Catheter	894	26	21	22
Quality Assurance	899	16	7	3
Weigh & Fill	893	7	0	0
Tape	895	4	0	3
Raw Bag	885	46	30	2
Total Associates	**436**	**261**	**120**	**55**

Measures

The survey consisted of thirty-three questions covering five areas of interest: (1) Individual Needs (2) Goal Attainment (3) Adaptation (4) Integration (5) Long Term Development (Table 3). The questions concerning individual needs attempt to identify the reasons why people would consider leaving the organization. These include being respected, treated fairly, honestly and consistently, receiving feedback and recognition, feeling valued, and feeling a part of the organization (Miller & Assoc., 1997).

Table 3

Question Structure

Question Type:	Question Numbers
Individual Needs	1 - 15
Goals	16 - 19
Adaptation	20 - 24
Integration	25 - 28
Long Term Development	29 - 33

Goal Attainment was measured by questions 16 – 19 dealing with if and how the organization's goals and performance are communicated. Adaptation questions (20 – 24) were centered on how the employees learn about important changes, both in their work area as well as in the organization as a whole, which is an indicator of the degree of adaptability of the organization to change. Questions 25 – 28 provided insight into the communication system within the plant – how work is coordinated and communicated (integration). The long term development section of the survey looks at the way work is organized and planned and how employees are trained both for their

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current positions as well as how career development and ongoing training are handled.

Data Analysis/Results

The plant wide survey average (see Figure 1) provides an overall picture of the survey results. There were four questions that rated below the lower limit (21, 26 – 28) all involving the communication system.

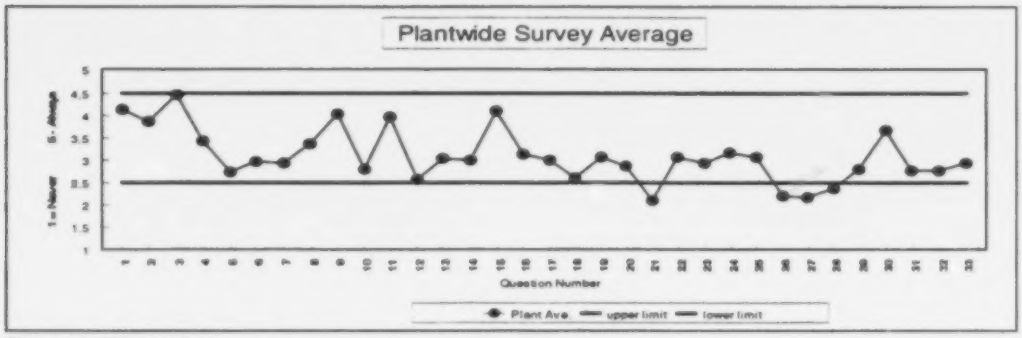

Figure 1. Plantwide survey average.

Associates perceive they do not know what is going on within the plant. A system to link departments and shifts may be needed as well as a process developed and implemented to allow for open and constructive feedback and conflict management. The four highest rated questions (3, 9, 11, and 15) occurred under the Individual Needs section. Associates feel that they are valuable to the company and their jobs are important and that they work in a safe environment. Job security is not a concern; there has been only one small temporary lay-off in the 25-year history of the plant. Personal success may be linked to the company's success due primarily to the lucrative retirement plan that many have taken advantage of after only 20 years of service.

The survey tracked department and shift as well as type of group e.g. exempt, hourly, and salaried non-exempt to see if there were any significant differences among these groups. The exempt and salaried non-exempt groups tracked very closely to each other with both tracking much higher than the hourly group (see Figure 2).

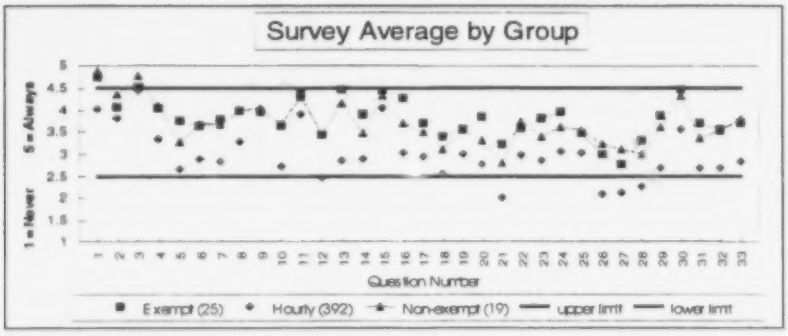

Figure 2. Survey average by group.

This can be explained by the traditional organization of the plant. These groups are comprised of engineers, supervisors, planners, inventory analysts, purchasing agents, and managers. All of the people in these two groups are in constant communication with each other and they attend regular meetings that keep them informed of any problems or new developments throughout the organization. They make most of the decisions that affect the rest of the plant.

The survey average by shift (see Figure 3) can be very misleading. Second shift associates appear to be very informed and satisfied with their jobs and they rated nearly every question higher than either first or third shift. Eighty-five percent of the employees on second shift have less than three years service with the company.

Employees staffing first and third shifts have on average more than eight years of service. Second shift employees are still being integrated into the work environment and are more concerned with learning to do specific tasks and understanding their responsibilities. Staffing on second shift is less than half of that on first shift which provides a greater opportunity for learning more jobs and allows for more flexibility. Nearly all of the new hires are placed on second shift and they accept the job knowing that it may be a very long time before they will have the opportunity to move to first shift. The supervisor on second shift is much less involved in meetings and therefore spends more time on the floor and is more accessible and available to the associates. Second shift associates feel valued and more connected to each other.

The opportunity to move to other areas in the plant is very limited for those associates on first shift who do not wish to relinquish their first shift hours. Therefore, first shift associates feel stuck in their jobs and have fewer opportunities to change jobs even though they do rotate jobs within their given departments. Third shift associates rated every question lower than their counterparts on the other shifts. They really feel segregated and cut off from the rest of the plant. There is no direct supervision on third shift and only one leadperson for the entire shift. Third shift is only one-fifth the size of first shift and one-half the size of second shift. There is no support staff other than quality assurance technicians available to answer questions or concerns.

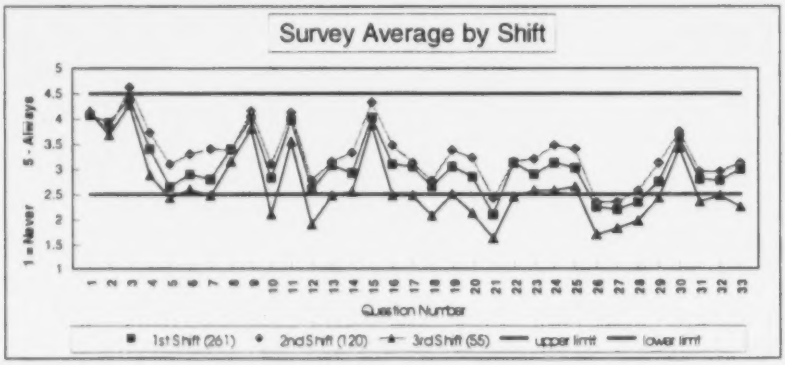

Figure 3. Survey average by shift.

At the time this survey was completed, only one department was implementing self-directed activities, Weigh and Fill. This department is a one-shift, first, operation and overall scored very high in all areas of the survey. They have access to data and the resources necessary to run their day-to-day operations. However, they also are not kept informed of changes and developments in other departments or on other shifts (Figure 4, Questions 21 and 27).

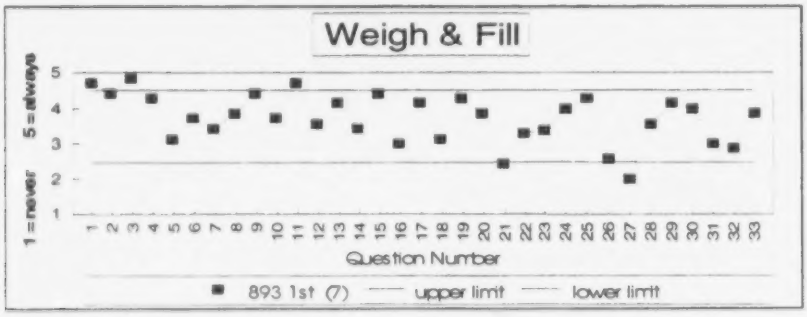

Figure 4. Weigh and fill.

Survey Conclusions

Results from the survey show that, as a company, the entire communication system needs to be greatly improved. Providing information about the plant in general, better feedback and recognition as well as expanding the training program to include interpersonal and team skills are needed. Safety and job security are not considered problem areas as they were rated very highly.

Overall, there were no surprises gathered from the survey data. All of the deficient areas are typical problem areas identified in a traditional organization: communication problems, lack of knowledge about company, plant, and department goals, lack of knowledge concerning other shifts and departments, lack of support on the off shifts, little personal or career development, lack of involvement in the business.

Actions Taken

As the Design Team continued with the gathering of data throughout the STS process, they attempted to incorporate lessons learned. One of the areas they were able to address immediately was communication. The communication matrix (Table 1) was constructed to identify available methods of communication. The Design Team communicated their progress to the plant regularly using as many types of communication methods as practical. The team also involved as many associates as possible throughout the data gathering process. All of the results from this survey were reported to the management and staff where many have initiated changes to improve the various situations.

The "As Is Social Survey" is only one method used by Hollister Incorporated to study the social system, which in turn was part of the Socio-Technical Systems (STS) Analysis. The information from this survey, combined with the other data gathered using the STS approach, will be used to guide and direct the development and implementation of the redesign plan. The redesign plan will attempt to find the best fit of both the social and technical systems to create a high performance organization.

Conclusions

It is easier to implement changes in organizations that are obviously in trouble. Everyone is aware of the need to change for security, stability and their personal success. However, in successful organizations, the need to change is difficult for the vast majority to comprehend. Why fix something that isn't broken? Hollister is a very successful company. There has been a lot of resistance to what they have nicknamed the outcome, HPO (High Performance Organization). Preparing the culture for change is an ongoing process. Designing changes for improving the work environment, increasing efficiency and reducing costs must be systematic and logical and must look at both the technical and social systems in order to produce high performance results.

Because innovation and adaptation require human commitment, we need to understand how the design of organizations influences the willingness of people to help organizations succeed. By studying the current operating systems within the organization, we can identify those areas that are working well and those that need to be improved. The survey provided specific data that will be used in the redesign process. It is obvious that the social system must be integrated with the technical system and both must be aligned with the organization's goals.

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Thriving on Change: An Organizational Identity Model

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Mergers often contribute to a climate of uncertainty causing members to revise how they view their organization. The purpose of this research was to investigate members' perceptions of organizational identity and understand how the organization can help members during such a change. Findings suggest that the organization's purpose and philosophy constitute organizational identity. Construction of identity is influenced by numerous factors. Suggestions for the HRD professional in facilitating organizational change are provided.

Keywords: Organizational Identity, Organizational Change, Mergers/Acquisitions

Mergers have transformed the landscape of organizations, contributing to an environment of instability (Bastien, Hostager, & Miles, 1996). Even when the merger is an avenue for organizational survival, it has the power to shake up emotions and produce feelings of loss and uncertainty (Mirvis & Marks, 1992; Overmyer Day, 1993; Schweiger, Csiszar, & Napier, 1994). The organization has an identity; it is the essence of the organization, a source of stability and definition for its members, and a basis for action (Albert & Whetten, 1985; Ashforth & Mael, 1996). With a change in collective status (Albert & Whetten, 1985), members are more aware of these organizational images (Ashforth & Mael, 1996) and are more likely to reflect on their organization's distinctive attributes (Dutton, Dukerich, & Harquail, 1994) than in a more stable period.

This study provided a unique opportunity to examine perceptions of organizational identity during a transformation process in an organization that had chosen a merger as its avenue for change. This research focused on what members described as the essence of the organization.

Theoretical Framework

Because mergers have been and are continuing to be a path for organizational growth and survival (Sikora, 1997), the human response to this dramatic change event was of interest. What emerged from a review of the literature on the human issues in mergers (Buono & Bowditch, 1990; McEntire, 1994; Napier, 1989; Schweiger, Csiszar, & Napier, 1993) were the feelings of loss of identity that often cripple people emotionally not only during the change but also long into the future (Cartwright & Cooper, 1996; McEntire & Bentley, 1996; Nahavandi & Malekzadeh, 1993). Although loss of identity appears to be a significant issue, there has been little research with this focus in an actual merger environment (McEntire, 1994). Also, most of the research that touches on this loss is embedded in varying definitions of organizational identity. A separate body of literature on organizational identity has been evolving using the definition by Albert and Whetten (1985) as its base. The merger literature on loss of identity is lacking this consistent foundation. Because aspects of identity appear to contribute to merger problems, this second body of literature on organizational identity was central to this research.

The literature on organizational identity is theoretical (Albert & Whetten, 1985; Ashforth & Mael, 1996; Bouchikhi & Kimberly, 1996; Dutton et al., 1994; Dutton & Penner, 1993; Fiol & Kovoor-Misra, 1997; Hatch & Schultz, 1997), and includes a limited but growing body of research (Dutton & Dukerich, 1991; Elsbach & Kramer, 1996; Foremen, 1995; Gioia & Thomas, 1996; Golden-Biddle & Rao, 1997; Gustafson, 1995; Gustafson & Reger, 1995). Much of this work is based on a noted article by Albert and Whetten (1985) defining the three necessary criteria for organizational identity: central character, distinctiveness, and temporal continuity. "Identity goes to the core of what something *is*, what fundamentally defines that entity" (Ashforth & Mael, 1996, p. 20).

There has been limited research on shared organizational identity (Dutton & Dukerich, 1991; Gustafson, 1995), what Dutton and Penner (1993) have labeled as "the collective version of organizational identity" (p. 104), from an organizational identity theory perspective. A case study by Dutton and Dukerich (1991) revealed six attributes that members used to characterize the Port Authority of New York and New Jersey. All informants described only one of these attributes—a professional organization with a uniquely technical expertise. The remaining five attributes were each suggested by less than half of the informants. Research by Gustafson (1995) also revealed a small number of shared organizational identity attributes; only three organizational identity attributes were shared by a majority of

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the respondents, although two of these may have been biased upward because they were related to elements used in the instrument. The three attributes were attitude toward customer, quality, and culture/values.

Past research has given limited attention to the classification and structure of organizational identity. Gustafson (1995) offered a preliminary classification of organizational identity attributes for organizations in hypercompetitive environments. He suggested that there are a limited number of intangible identity attributes that address "why and how things are done" (p. 180) and many more specific substantive identity attributes that deal with "what things are done" (p. 180). Based on this classification scheme, not all identity components are central, distinctive, and enduring, which differs from the Albert and Whetten (1985) definition. Gustafson suggested further research in this area.

The construction of organizational identity was also a focus of this research. According to Bouchikhi and Kimberly (1996), organizational identity is typically defined at founding and is a product of the motives, skills, experiences, and personality of the founders and the context of the founding. It is a reflection of the powerholders of the organization (Ashforth & Mael, 1996). The type of people that a company hires is often influenced by the background and experiences of its founders and their values and vision for the organization (Kimberly & Bouchikhi, 1995). Ashforth and Mael (1996) explained, "There are limits to how far identity claims can deviate from perceptions of either external stakeholders or internal members" (p. 40). This study was designed to further investigate the construction of organizational identity using qualitative methods.

Although there are disagreements about the definition of identity (Barney et al., 1998), the enduring nature of identity within a context of change (Gioia & Thomas, 1996), as well as the need to discuss dimensions of identity (Barney et al., 1998), this identity literature builds on a foundation that contributes to the development of theory. This focus for research is in its infancy, and there is a need to further develop and contribute to organizational identity theory development.

Method

The questions that served as the focus for this research were as follows: (1) How do members describe organizational identity? What attributes are core, distinctive, and enduring as defined by Albert & Whetten (1985)? What attributes are shared? (2) What contributes to a member's perception of organizational identity? (3) How can the organization support its members during a merger? These questions lend themselves to investigation through a qualitative approach (Albert, 1998).

Using an inductive and emerging process, this qualitative case study provided an opportunity to examine a bounded system to uncover insiders' perceptions of organizational identity within the context of a merger experience. An in-depth examination of one organization's response to these issues was the focus of this research. This particular case offered a unique setting because the organization was using a merger for the purposes of losing identity in an effort to remove the stigma attached to its name. It was a contemporary event where phenomena and context were interwoven. The results of the data gathering produced a rich description of the complexities of the situation, revealed through many sources, over a six-month period.

Context of the Study

The setting for this research was a company that I shall label as Company A. Company A was a public company in the business of commercial air transportation. This company offered low-fare, passenger air service. Company A was extremely profitable and growing until its accident. This was followed by a massive reduction in service and a furlough of employees. Scheduled service resumed, but losses continued to accumulate. In an effort to regain its profitability, the airline tried to attract customers back to the company. After continuing declines in profits, the company announced a merger. This merger was specifically targeted as the best vehicle for transforming the company's identity that had been damaged as a result of intense and unrelenting negative media exposure since the accident. Two months prior to the official merger, the company enacted a name change that would be consistent with the upcoming merger.

Data collection began after the merger was announced, continued through the time of the identity change, and was completed a couple of months after the merger went into effect, totaling a six-month period. The timing of this research coincided with heightened emotions about issues of identity in this organization. Attitudes and comments of interviewees were reflective of the point in time of the interview.

1. The participant was an employee of Company A.
2. The participant had been employed at Company A prior to the accident. This criterion was chosen predominantly because of the enduring nature of identity. In order for employees to assess whether or not attributes were enduring, they needed to have experience with the company over a period of time. The first 31 employees met this criterion. The remaining five interviewees were selected specifically because they were "new" (six months or less in employment) to determine if there was a significant difference in their perceptions. These employees could be part-time or full-time employees. The decision to expand the sample was made after completing the 31 interviews. As explained by Miles and Huberman (1994), "Samples in qualitative studies are usually not wholly prespecified, but can evolve once fieldwork begins. Initial choices of informants lead you to similar and different ones" (p. 27).
3. The various functional groups in the organization—pilots, in-flight, maintenance, and reservations—were fairly equally represented in the sample: five pilots, six in-flight, five maintenance, and six reservations. A larger number of customer service employees, 14, were interviewed because that category consisted of several subgroups: ticketing, gate, baggage, ramp, transfer, and operations employees. This was an effort to achieve purposeful random sampling (Patton, 1990). Using a process that enabled the selection of members from each functional group, I was able to use a sample of 36, yet increase the credibility of the results.

In addition to these 36 interviews, I talked with numerous employees in informal, non-taped conversations. Notes from these were included as memos.

In my second round of interviews which concentrated on mini-tour questions, I began by interviewing my key informant. Then, after further analysis of all data, I conducted 15 additional interviews. Ten of these interviews were with employees included in the initial round of interviews, two from each functional area. Five of the 15 interviews were with employees who I had not previously interviewed. Thus, for this research, I formally interviewed 42 employees of Company A; ten of those employees were interviewed during both the initial interview period and the later follow-up round of interviews.

Data Collection

The purpose of this research was to understand what employees perceived as being core, distinctive, and enduring about their organization. The interview guide was used for each interview. The guide was modified as new issues emerged. Using a semi-structured interview process, I was able to efficiently use the time allotted, and I had the flexibility to follow leads that emerged in the interview.

A second data source was observations. Observations took place in the natural setting where I was able to experience firsthand life in this organization. Approximately 21 hours were dedicated to observing activities in Company A.

A third data source was documents. Company printed materials consisted of annual reports, press releases, brochures, promotions, advertisements, and flight-related documentation. Numerous documents from the newspapers and magazines were also available.

Opportunities to observe and review physical artifacts were particularly critical in this research. Because this study focused on identity during a merger, it was quite revealing how the company logo was handled before and after the name change. Data from interviews, observations, and artifacts were coded using the NUD*IST software.

Data Analysis

Data collection and data analysis are iterative, tightly interwoven processes. Using the constant comparative method (Glaser & Strauss, 1967) while coding data, it is critical that one also compares data with previous data coded in both the same and different groups. Then, through a complex analytical process of deductive and inductive thinking, the researcher not only relates subcategories to a broader category in a set of relationships but also connects these relationships to data. The process of proposing and verifying patterns against data, produces patterns that are grounded in data.

A later stage of analysis involves identifying the essence of the story revealed through the data and analytically formulating the story line by relating other categories to the core category. This is a complex integration process that relates categories in ways that can produce theory that is grounded in the research data.

Establishing Rigor for the Inquiry

This study was conducted using techniques to support the trustworthiness of the findings. This research allowed prolonged engagement because the data collection was spread over six months, totaling 85 hours in the field.

Triangulation can be carried out through the use of multiple and different sources, methods, investigators, and theories (Denzin, 1970). I triangulated the data using multiple and different sources and methods. This research involved multiple sources because I gathered data from over 42 different employees in several functional groups of the organization. Multiple methods involved my use of interviews, observations, documents, and physical artifacts in the collection of data.

Peer debriefing is an opportunity to probe for biases in the researcher's thinking. A frame interview was conducted prior to interviewing, and throughout the research, I periodically posed questions to peers.

Negative case analysis was used in efforts to rethink themes in response to exceptions that might not fit one's thinking. The importance of dealing with negative evidence was central to establishing credibility. Throughout my data collection and analysis, I consciously identified exceptions and followed up on them to enhance my understanding of the meaning behind the exception and its impact on the themes that I felt were emerging.

Although some state that "the general rule of thumb here is to transcribe only as much as is needed" (Strauss & Corbin, 1990, p. 30), I chose to transcribe the initial 36 interviews to ensure that all interview data were preserved and checked by each interviewee, enhancing credibility through member checks. Member checks were critical opportunities to have those who provided data also sign off on the accuracy of that data. In order to check the accuracy of transcriptions and their consistency with the overall feelings of the person interviewed, I mailed a copy of the transcription of each interview to that interviewee and requested that they sign off on its accuracy or make changes where needed. I waited to analyze the interview data in the NUD*IST software until I received these responses.

Member checks also can involve taking tentative interpretations back to the people from whom they were derived and asking them if the results are reasonable. In two functional areas, I met with a manager or director and reviewed how I was interpreting data. This was an excellent opportunity to get feedback and also to pose follow-up questions for my own clarification. I also met with the key informant after coding most of my data in order to present tentative findings and get his reaction. Finally, during my mini-tour interviews, I asked 15 additional members for feedback on my interpretations.

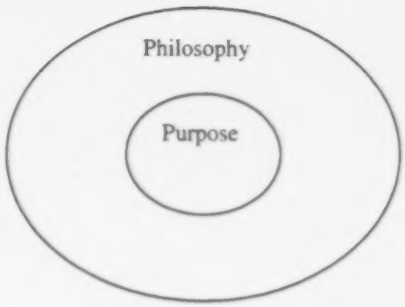
The audit trail is the collection of records of raw data, analysis, and process, as well as any other documentation from the research. A record of such detail allows someone other than the researcher to make a determination if the analysis and interpretation are supported by the data. I maintained an audit trail throughout the study. All interview transcriptions, audiotapes, observation notes, memos, documentation, and coding results were stored in an organized manner. Also, NUD*IST maintained rawfiles and coding results.

Results

How Do Members Describe Organizational Identity? What Attributes Are Shared?

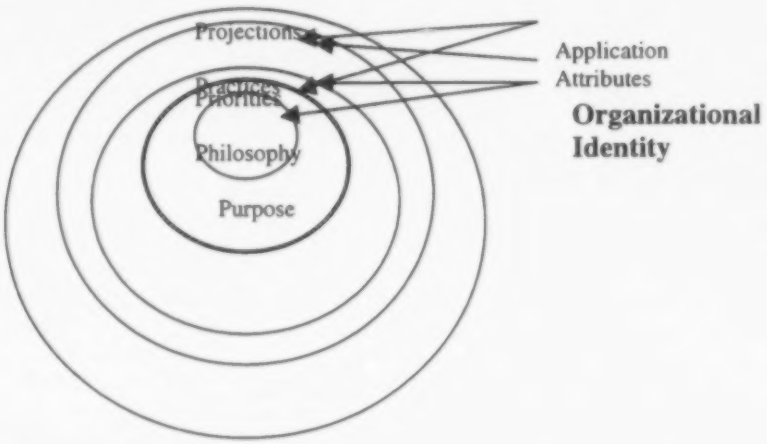
Data revealed that a small number of organizational identity attributes constitute organizational identity. The findings of this research suggest that organizational identity is composed of a purpose and a philosophy. The purpose is the organization's fundamental reason for being in business (not to be defined as making money). An enduring purpose is stated broadly and usually benefits society. The philosophy is the distinctive framework and guiding spirit for how members do that business. This unique philosophy is perceived by members as the special way members do business that sets them apart from others. These two components, shown in Figure 1, are organizational identity as viewed by its members. It is the basis for what members do at work and how they do it. Because this is the core and essence of the organization and the foundation and framework for action, it is the heart and soul of the organization.

Figure 1. Components of Organizational Identity



Surrounding these organizational identity components are priorities, practices, and projections of the organization. These application attributes are what outsiders see and what insiders do naturally if their behavior is inherently aligned with the identity. An organization typically has priorities or standards for action that are more enduring although they are not organizational identity. Priorities are the values that support achieving the organization's purpose and are consistent with its distinctive philosophy. These priorities are a direct application of the purpose and distinctive philosophy to work. Outside of those more enduring attributes are internal and external practices and features that fluctuate with the needs of the organization in its attempts to be competitive as well as projections or images of the organization that are a reflection of the organization to the public. These images, although extremely important to the organization, are also not part of organizational identity. Although these are the aspects of the organization that are most visible to the public, they are typically symbols used by the organization to influence impressions. Together, organizational identity and the application attributes are the organization's attributes. Figure 2 illustrates the structure of organizational attributes.

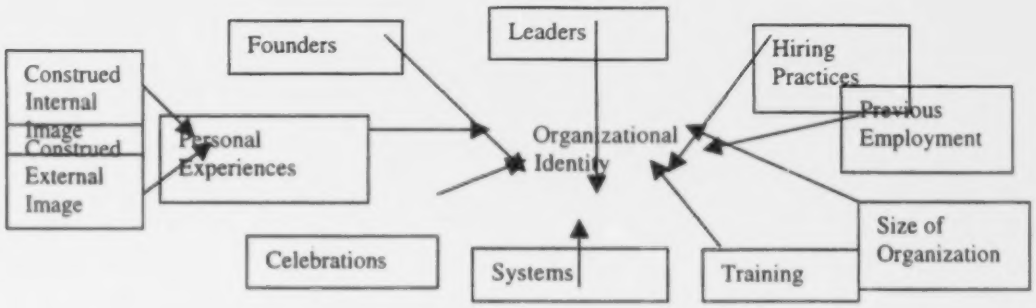
Figure 2. Structure of Organizational Attributes



What Contributes to a Member's Perception of Organizational Identity?

Findings indicate that organizational identity is a product of multiple elements, as illustrated in Figure 3. Based on this research, the following have contributed to the way this organization constructed its organizational identity: founders and leaders, hiring practices, previous employment of organizational members, organizational size, training, systems, celebrations, and personal experiences. Personal experiences are influenced not only by what a member sees and does related to work but also by what a member believes others inside and outside the organization say and think about the organization, their construed internal and external images.

Figure 3. Construction of Organizational Identity



The consistency in how these factors support organizational identity can impact the organization. Fragmented activities that do not contribute to the preservation of organizational identity can be quite damaging to the organization. The factors that helped construct identity are also the vehicles for maintaining or changing that identity.

How Can the Organization Support its Members During a Merger?

In addition to members' concerns about the future of the organization, they have other needs during such a major change. Timely, regular, and congruent communications are critical for relieving uncertainty. Such communications provide information and demonstrate that the employees are important to management and to the success of the organization. Face-to-face meetings with the leadership show that the leader cares about the people and that they can trust that leader with their futures.

Stability during such a change can be achieved by clarifying a member's status of employment as well as the status of the new organization's identity and plans for the future. This gives members an anchor to support them through the change, giving them knowledge of what is constant and direction and insight into their future.

Symbols can be used in both expressive and instrumental roles to represent the new organization and promote identification with it. Such a process may include a ceremony to close one stage in the organization's life and celebrations to welcome the new. The management of such symbols could be consciously planned in order to help members make the emotional change from what they have been a part of to the new entity.

Conclusions and Implications

This research contributes to the development of organizational identity theory in the aspects of structure, content, sharing, and construction of identity. This contribution to theory development can influence knowledge that impacts the organizational development component of HRD practice. It is suggested that future research on the human aspects of mergers be framed within theory and research in organizational identity so that it contributes to theory development and a better understanding of the processes that support such changes in an organization.

This research on organizational identity has several implications for practice, particularly for human resource development (HRD) professionals (see Figure 4).

First, HRD professionals should be integral participants in planning and implementing mergers and other organizational change events. Because the primary focus of management is directed at financial and strategic decisions, those in key decision-making roles are sometimes insensitive to the impact of the change on the people in the organization. And this impact can produce negative outcomes that can influence merger success. There must be someone in a leadership role who listens to and represents the voice of the employees. In addition, for humanitarian reasons, there needs to be an advocate for how this change will impact the people so that appropriate actions can be taken to make transitions and change more livable for the workforce. The HRD professional has the obligation to serve in this role and, as a team member, participate in planning and executing these activities.

During organizational changes, such as a merger, the HRD professional could concentrate efforts on those levers that will contribute to satisfying human needs and enhancing productivity. Based on the findings of this research, this effort involves targeting four distinct areas.

First, the HRD professional can help in monitoring and facilitating communications. This role involves ensuring that timely and accurate communication systems are in place throughout the change process. These communications are necessary during normal times but are critical during times of uncertainty and transition. An array of techniques can be used including face-to-face meetings with leadership, memos, telephone hot lines, and newsletters. The HRD professional must be aware of how well these communications are serving their purpose and monitor information flow so that unnecessary uncertainty does not deter productivity.

Second, the HRD professional can support leadership in defining and translating organizational identity. This involves ensuring that leadership is clear on the organizational identity attributes of the merged organization and then ensuring that members understand that identity and evaluate whether they fit with it. When organization members have clarity about the essence of the organization and if they feel comfortable and connected with it, there is less uncertainty because they have an anchor of stability, even in an environment of change. The HRD professional could work with the leadership to clarify changes and facilitate processes so that those changes can be smoothly adopted in the organization.

Third is the focus on future organizational images. The HRD professional can work with the leadership in determining how to clarify direction for the future of the organization and then clearly communicate that to all employees in a way that sparks enthusiasm among members.

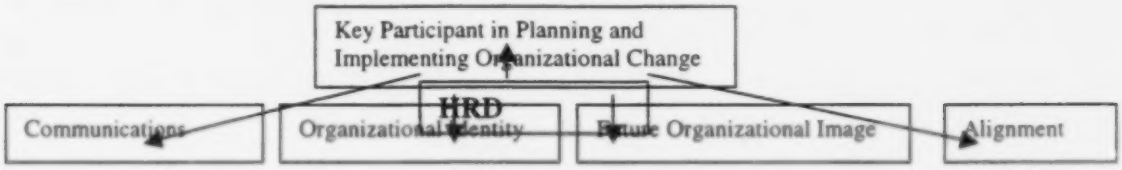
And, fourth is the role of supporting alignment. The HRD professional must work with others to be alert to misalignments, create new alignments, and strengthen current alignments within the organization so that attributes of the organization are congruent with the organizational identity and future image. The levers for constructing organizational identity offer a focus for managing alignment. If those elements that construct identity do not consistently reinforce the organizational identity, then such misalignments must be corrected. These elements are also sources for creating new alignments and strengthening current alignments. Also, these levers should be harmonious with the vision of the organization so that all actions are consistent not only with who they are as an organization but also where they are going.

The HRD professional could also work with members to determine if organizational attributes support organizational identity. Because there is a funnel effect for organizational attributes, the HRD professional could help others to be alert to any misalignments in those attributes.

In times of transition, members need the stability of knowing what is not changing, and they need the challenge of knowing where they are moving. With this basic information, members can better travel through transitions and maintain a sense of balance within the change. With the anchors of information, organizational identity, and future organizational image, each member can contribute to organizational success by aligning their actions to what is important to the organization.

Thus, the HRD professional has a critical role to play in enhancing the capacity of an organization to not only survive change but also thrive on it. As a change agent, the HRD professional must promote communications, guide leadership in defining and translating organizational identity and a vision for the future, and advocate the continuous creation of alignments within the organization to both the identity and the organization's strategic goals. The challenge is to grow and develop an organization in ways that reinforce and adhere to the stabilizing identity core yet simultaneously motivates members to be flexible in all other aspects of the organization. The HRD professional must take on this critical role in facilitating change and thus enhancing the organization's capacity for competitiveness.

Figure 4. Roles of HRD Professionals in Facilitating Organizational Change



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Organizational Change and Transformation: A Multifaith Perspective

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The literature related to organizational change reflects a paradigm shift in that for the last decade it has increasingly included a focus on spiritual and religious dimensions. Among the reasons are increased anxiety due to high levels of global macro-change, as well as post-modern thinking seeking to integrate dimensions beyond the purely scientific. As the faith dimension gains new legitimacy, we must seek to understand how different religious beliefs potentially imprint on managerial decision-making.

Keywords: Organizational Change, Multi-Faith, Spirituality

During the last decade we have seen a proliferation of references to spirit in the workplace, (Chappell, 1993; Conger, 1994; Hawley, 1993), spiritually grounded leadership (Lee & Zemke, 1993; Covey,1992; Bolman and Deal, 1995; Daft and Lengel, 1998; McCarthy, 1996; Neal, 1997), values based management (Marcic, 1997; Kueng, 1998; Miller, 1996; Toney, 1998) in the literature related to organizational change. In addition, the manufacturing and sales of Christian-based products has grown to a stunning $4 billion in 1998 in the United States alone (Marketplace, NPR, 1998). Independent watchdog organizations such as Transparency International are dedicated to un-covering, containing and eradicating corruption in the civil society as well as the private sector. In 1993 in Chicago, the Parliament of the World Religions proclaimed the principles of a Global Ethic, which provided the guidelines for principles of a global business ethic. (Kueng, 1993, and 1998).

What are the reasons for this recent paradigm shift, for the inclusion of the spiritual and religious dimensions in the way we debate organizational and business change? Several reasons are commonly suggested:

1. We are currently in the midst of high rates of global macro-change. High rates of change tend to destabilize systems. Anxiety rises in response. This anxiety needs to be managed. One way is to seek guidance in what is familiar and authoritative, subsequently; many turn to scripture and faithstories. " It is common for people to wring their hands and wonder: how can scripture help us?" (Doug Knight, personal communication, 1998).
2. The age of modernity, with its focus on reasoned, scientific thinking ushered in the rise of secular humanism and the rejection of anything that could not be quantified or empirically proven. Post-modern thinking not only follows the swinging of the pendulum in the opposite direction, but also attempts a marriage between scientific and mystical, spiritualistic thinking, acknowledging the dialectic process of thesis, antithesis and synthesis. This marriage has gained much legitimacy from the insights of quantum physics. (Capra, 1975). Wheatley, a management consultant, states: "The mechanistic image of the world is a very deep image, planted at subterranean depths in most of us. But it doesn't help us any longer. Our own search for new ways of understanding has led us to philosophers, scientists, poets, novelists, spiritual teachers, colleagues, audiences and each other. We keep exploring what we can see when we look at life and organizations using different images." (Wheatley, 1996, pg. 1)

As the faith dimension gains new legitimacy, it seems apropos to explore how faith could possibly imprint, consciously or unconsciously, on daily decision-making processes of business leaders as they steer their organizations through an ever-changing world. By including the multi-faith perspective, we are acknowledging both the unity and diversity of the market place in this global village.

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Conceptual Framework

Change leaders and consultants are sometimes hampered by an insufficient understanding of how deeply held beliefs and values impact individual reactions to the change process. It is impossible to understand the worlds of art history, literature and politics without understanding the impact of religion on these fields, similarly, this is true for the study of organizational change. In multinational companies, Hindus, Buddhists, Christians, Jews or Baha'is may work together, each operating from their respective frame of religious reference. Failure to incorporate this dimension will hamper many communication and problems-solving collaborative efforts. Once we understand the faith dimension and its impact on leadership and decision-making more fully, efforts at organizational change will become more effective. This will not only affect organizational well being, but also our ability to conduct business across cultural and religious borders.

Marcic (1997) has written extensively on the importance of balancing the five dimensions of work in the pursuit of organizational change. The five dimensions are as follows:

Physical

Concerned with physical life issues, such as buildings, equipment, comfort, safety, and adequate pay. Questions to ask are: Does your company operate mostly in the black? Are you in continuous financial crises? *Do you have the resources to pay your employees decently? Are compensation differentials between top and bottom excessively large? Increasing? Is there a high turnover rate for employees? Are the places of work (factories, offices) clean, comfortable, well kept, and adequately furnished? Is the equipment modern, efficient, and safe?

Intellectual

Includes the collective intelligence of employees plus their continuing drive for further development and learning, as well as abilities to effectively use available resources, to plan productively, and to be on the cutting edge. Questions to ask are: Do your engineers, technicians, or others keep up with cutting-edge technology? Do you spend adequate resources to send people for continuing education or to important professional conferences? Is spending on continuing education as a percentage of sales increasing? Are employees able to get reference materials, books, journals, and magazines that will help them learn more about their work and the environment? Do you reward employees who continue to learn? Are people happy to learn (rather than having to be coerced)? Do other organizations respect the knowledge of your employees? Do you respect the knowledge of your employees? Do employees often lack the necessary competence to complete projects adequately and on time? *

Emotional

Involves the interpersonal work environment, how well people get along with each other and how effectively they can be a team. Research shows that effective teams usually need members to be concerned with the process skills of support, listening, positive feedback, and lack of defensiveness, all of which require members with mature emotional development. Questions to ask: Do there seem to be high levels of job satisfaction? Do people enjoy working with each other? Do employees like one another? Are there a disproportionate number of problems with depression, alcoholism, and frequent, even violent, outbursts? *In meetings, do people behave defensively or with power plays? * Are people afraid to bring up in meetings what they really feel? "Is there frequent concern about " not upsetting the boss"? *

Volitional

The desire or will to change for the better. We may know that some other behavior would be healthier but we may lack the will to change it. One psychiatrist wrote that the hardest thing for his patients was not to change but to decide to change. Once the will was there, change was relatively easy. Questions to ask: Is there a willingness to look at new ways of doing things? Do you rarely hear "It won't work" or "That's impossible to do"? Is there a high level of energy on new projects? Do workers put energy into maintaining the status quo? * Are new programs met with many complaints and much resistance? *

Spiritual

Concerned with moral issues, such as justice and respect, and working toward empathy. Understands each member to be a unique human being, a sacred soul, with dignity. Questions to ask: Is there an acceptance and assumption of integrity among coworkers and bosses? Do people trust on another? Do they trust management? Do employees feel exploited or treated unjustly? * Do customers expect and get a quality product? Is cynicism common among employees? * Do people joyfully help one another?

Is there a lot of backbiting? * Are there political fights? Political intrigues? Political posturing? * Is there an openness of communication that depends on a deep level of trust and commitment? Is there a unity of "theory" and "practice" (i.e., do managers practice what they preach)? Can groups discuss problems and handle conflict in a competent and dignified manner? Is there a "spirit" of service to one another, to clients, to suppliers?

Note: * indicates negative scoring
From: Marcic, D. (1997), p. 40-41

The World Religions

The existence of nine to twelve world religions is commonly suggested. Of those, Islam and Christianity make up half of the world's population. Knowledge of Hinduism is essential to understanding modern Asia and the cultural heritage of its people living in Europe and America. The Bahai Faith is a relatively young, but growing religion, which maintains that there is a basic unity of all religions. Due to space and time constraints, we have chosen to highlight three religions, Hinduism, Baha'i Faith, and Christianity, and to examine their possible impact on organizational change. However, further study for the review of all world religions is indicated.

Hinduism

Hinduism is perhaps the oldest, most complex and diverse of all the world religions. It is the source for three other religions: Jainism, Buddhism and Sikhism (which is a combination of religious features of Islam and Hinduism), but has eventually absorbed distinctive features of those religions into mainstream Hindu thought. (Hopfe, 1998) According to Capra (1991), Hinduism is "... a large and complex socio-religious organism consisting of innumerable sects, cults and philosophical systems and involving various rituals, ceremonies and spiritual disciplines, as well as the worship of countless gods and goddesses. " (p.85) The spiritual sources of Hinduism are numerous and complex. consisting of :

1. The four Vedas, the oldest sacred books; the law of Manu, the moral and ethical law which provides the roots for many social and religious traditions which characterize modern Hinduism, including the varna, or caste system.

   For the Brahmanas, (priests) he created teaching, studying, sacrifice, officiating at sacrifice, giving gifts, and accepting gifts.

   For the Kshatriya, (warriors), he created in short the protection of people, giving gifts, performing sacrifices, studying and nonattachment to sense pleasure.

   For the Vaishya, (traders) he created the protection of cattle, charity, performance of sacrifices, studying, trading, lending on interest, and agriculture.

   The Lord created only one profession for the Shudra (manual workers): service without envy of the above three castes. (The Law of Manu, 1:88-91)

2. The Bhagavad Gita, India's most favorite religious text that is essentially and epic poem. The teachings inherent in the Gita are many, but Hopfe (1998) suggests the following as the main ones:
   - to perform the duty of one's caste
   - to be open to a variety of religious expression, such as asceticism, meditation, devotion to and worship of gods, obedience to caste rules
   - to believe that Vishnu is a god who loves human beings: "For whenever the law of righteousness withers away and lawlessness arises, then do I generate myself on earth." (Bhagavad Gita, IV:7)
   -

The goal of Hinduism is liberation from karma, the Sanskrit word from a root, which means "to do or act", and samsara, which means, "to wander across". According to Hindu belief, "one is bound to life in ignorance and pain, living over and over again through countless generations. Release from life comes when there is true knowledge of the illusion of life. 'By knowing God, man is freed form all bonds.'" (Hopfe, 1998, p.90) This is a long and difficult process, which requires much study: " Arise, awake, go to the sages and learn. The wise say that the path is sharp like the edge of a razor, hard to walk on, and difficult to obtain". (Katha-Upanishad, I.14)

Spiritual and mental development is achieved through the practice of yoga meditation, which focuses of freeing the mind from anger, lust, hatred, and greed. According to the Yoga Sutra, there are eight steps, which involve:

- vow of restraint against harming living creatures and unchastity
- attempting to achieve internal control, calmness, and equanimity
- learning and practicing bodily postures
- breath control
- control of the senses by shutting out the outside world
- extreme concentration on a single object
- seeking to achieve meditation
- seeking to achieve trance, becoming one with Brahman. (Hopfe, 1998, p. 105)

The concept of time is seen as moving endlessly through various cycles. At the beginning of a cycle, there is peace, abundance, and morality. Then the world begins to decay, famine, wars and general immorality become the rule. Finally, the world is destroyed. When one cycle of time is completed, the world dissolves and all souls depart into suspended being. After a period of calm, a new cycle begins and the souls are reborn in new bodies (Hopfe, 1998).

Like all religions, Hindus struggle with adjusting to the age of modernity. In the past, " people were taught to accept their lot in life and not complain, in that the next life might be better. If problems became so severe that one could not endure them, there was always the alternative of life as an ascetic." (Hopfe, 1998, p. 115)

Baha'i Faith

All the prophets of god proclaim the same faith.
Bahaullah

In 1863, the son of one of the most distinguished families in Persia revealed to his followers that he was the messiah and assumed the name of Bahaullah—"the Glory of God". His writings form the basis of the Baha'i doctrines and teachings:

- the oneness of the entire human race
- independent search after truth, unfettered by superstition, tradition, or imitation
- basic unity of all religions
- all forms of prejudice, - religious, racial, class, national, are to be condemned. " Religion should unite all hearts and cause wars and disputes to vanish from the face of the earth; it should give birth to spirituality, and bring light and life to every soul. If religion becomes a cause for dislike, hatred and division, it would be better to be without it... Any religion which is not a cause of love and unity is no religion." (J.E. Esslemont, Baha'llah and the New Era, 1976, p.6)
- harmony must exist between religion and science.
- equality between men and women, "Humanity is like a bird with its two wings—the one is male, the other female. Unless both wings are strong and impelled by some common force, the bird cannot fly heavenwards. According to the spirit of this age, women must advance and fulfill their mission in all departments of life, becoming equal to men. (Ibid., p. 154)
- compulsory education as a necessary condition for world peace and stability.
- universal language
- abolition of extremes of wealth and poverty
- a world tribunal for the adjudication of disputes among nations
- everyone should perform some form of work in the spirit of service: "It is enjoined on every one of you to engage in some occupation—some art, trade, or the like. We have made this—your occupation—identical with the worship of God, the true One. (Bahaullah, Glad Tidings.)
- Justice should be glorified as the ruling principle in human society and religion for the protection of all people and nations.

- the establishment of a permanent and universal peace should be the supreme goal of humankind. (Thirteen principles from Public Information Department, National Baha'i Headquarters, 112 Linden Avenue, Wilmette, IL 60091)

According to Baha'i beliefs, heaven and hell are conditions of the soul, which is eternal and in continuous progress. "When the soul is close to God and God's purposes, that is heaven, when the soul is distant from God, that is hell" (Hopfe, 1998, p. 402) " In creation there is no evil; all is good. Certain qualities and natures innate in some men and apparently blameworthy are not so in reality." (Abdul Baha, 1964, p. 250) One of the most important aspects of Baha'i life is that all of life should be lived in the spirit of prayer, this applies to work, thoughts, actions, relationships.

> Be generous in prosperity, and thankful in adversity. Be worthy of trust of thy neighbor and look upon him with a bright and friendly face. Be a treasure to the poor, and admonisher to the rich, an answerer to the cry of the needy, a preserver of the sanctity of the pledge. Be fair in thy judgment, and guarded in thy speech. Be unjust to no man, and show all meekness to all men. Be as a lamp unto them that walk in darkness, a joy to the sorrowful, a sea for the thirsty, a haven for the distressed, an upholder and defender of the victim of oppression. Let integrity and uprightness distinguish all thine acts. Be a home for the stranger, a balm to the suffering, a tower of strength for the fugitive. Be eyes to the blind, and a guiding light unto the feet of the erring. Be an ornament to the countenance of truth, a crown to the brow of fidelity, a pillar of the temple of righteousness, a breath of life to the body of mankind, an ensign of the hosts of justice, a luminary above the horizon of virtue, a dew to the soil of the human heart, an ark on the ocean of knowledge, a sun in the heaven of bounty, a gem on the diadem of wisdom, a shining light in the firmament of thy generation, a fruit upon the tree of humility." (Bahaullah, 1952, p. 96)

Christianity

Jesus said to him, " I am the way, the truth, and the life; no one comes to the Father, but by me."
John, 14:6

With an estimated number of 1.783.660.000, in 1991, one third of the World's population is identified in some way with Christianity, as the largest religion in the world. (Hopfe, 1998). Christianity grew out of Judaism with the event of Jesus of Nazareth and the belief that he was the savior of humankind. Thus, Christianity incorporates both the story of the Jews, as God's chosen people, in the Old Testament, as well as accounts of Jesus' life and teachings by his disciples in the New Testament. Major elements of the Old Testament are comprised in the ten commandments, which constitute the laws which adherents are held to obey:

1. I am the Lord your God, who has brought you out of the land of Egypt, out of the house of bondage. You shall have no other gods before me.
2. You shall not make any graven image.
3. You shall not take the name of the Lord your God in vain.
4. Remember the sabbath day, keep it holy.
5. Honor your father and your mother.
6. You shall not kill.
7. You shall not commit adultery.
8. You shall not steal.
9. You shall not bear false witness against your neighbor.
10. You shall not covet your neighbor's property.

(Summarized by Hopfe, 1998, p. 265.)

It is often suggested that the God of the Old Testament is one of wrath and judgment, who requires strict adherence to the his laws, while the God of the New Testament is one of love, forgiveness and compassion, as exemplified by the Beatitudes from Jesus' Sermon on the Mount:

> Blessed are the poor in spirit, for theirs is the kingdom of heaven. Blessed are those who mourn, for they shall be comforted. Blessed are the meek, for they shall inherit the earth. Blessed are those who hunger and thurst for righteousness, for they shall be satisfied. Blessed are the merciful, for they shall obtain mercy. Blessed are the pure in heart, for they shall see God. Blessed are the peacemakers, for they shall be called sons of God. Blessed are those who are persecuted for righteousness' sake, for theirs is the kingdom of heaven. Blessed are you when men revile you and persecute you and utter all kinds of evil against you falsely on my account. Rejoice and be glad, for your reward is great in heaven, for so men persecuted and the prophets who were before you. (Summarized in Hopfe, 1998, p. 306)

Currently, the numbers of affiliates are declining in Europe, remaining stable in the United States, but are growing in Africa, Asia, and Latin America. The two most popular and controversial issues in modern Christianity are Liberation Theology, which focuses on issues of social and economic justice for the poor and oppressed on the one hand, and fundamentalism on the other hand, which combats all liberalizing trends in American culture. Fundamentalists believe that the Bible needs to be read and understood literally, that it needs to be defended against modern scientific and philosophical thought. (Hopfe, 1998) However, there are some basic issues, which underlie all Christianity:

- Are humans sinful?
- Can they be redeemed and saved through God's love?
- There is only one life on earth, but is there life after death?

Marcic's Five Dimensions of Work and the Three Religions:

Based on the above examination of religious teaching and principles, the following model emerges:

Physical/Material Dimension

1. Hindu = low, asceticism, inevitability of cycle of birth, death, and rebirth, non-attachment to sense pleasures.
2. Baha'i Faith = high, abolition of extremes of wealth and poverty, " *be generous in prosperity*".
3. Christianity = high for liberation theology with focus on alleviating poverty and increasing social justice; low for traditional theologies with focus on sacrifice, redemption and afterlife.

Intellectual Dimension

1. Hindu = low, eastern focus on mystical aspects, "illusion of life", " one is bound to life in ignorance", learning and studying does not focus on acquisition and creation of new knowledge, but on alignment with universal laws and principles.
2. Baha'i Faith = high, independent search after truth, unfettered by superstition, tradition, or intimidation, freedom from prejudice, creation of harmony between religion and science, compulsory education.
3. Christianity = low, Old Testament stresses obedience and loyalty to law, not critical evaluation and innovation and continual improvement. New Testament stresses humility and service to the poor.

Emotional Dimension

4. Hindu = low, not an issue in sacred texts, except for acceptance of suffering as the basic condition of life, goal is to free oneself from emotions and the restraints they create, rather than an exploration and acceptance of emotions as an integral part of life. This involves freeing the mind from anger, lust, hatred and greed.
5. Baha'i Faith = high, focus on harmony and unity between people, religion should unite all hearts, if it becomes a cause for dislike, hatred or division, it would be better without it. Focus on awareness of self and self-improvement.
6. Christian = low, focus on suppression of negative emotions such as greed, lust, and envy which, in their inevitable occurrence, are either punished of forgiven by God. Attempt to transcend self.

Volitional Dimension

1. Hindu = high, disciplined pursuit of meditative practices.
2. Baha'i Faith = high, focus on justice and equality between people, races and gender.
3. Christianity = high, focus on commitment to laws and virtues.

Spiritual Dimension

1. Hindu = high, permeates every aspect of life.
2. Baha'i Faith = high, work is a form of worship.
3. Christianity = medium, spirituality is confined to private, as opposed to the public domain of work, duality of Western culture.

Discussion

The above model is based on selections of sacred texts of the three religions which have been examined, as well as on interviews with adherents to these religions. While the model serves as a conceptual framework for further, more extensive study, it is in itself, at this stage, untested. It is our hope, however, that it will stimulate processes along all five dimensions, which were previously discussed. Along the physical dimension, we hope that managers will begin to consider this often-neglected area by developing an awareness of the reasons for this neglect. Regarding the intellectual dimension, we hope to encourage discourse about the ideas presented. Concerning the emotional dimension, we would like to acknowledge the potential for controversy, but hope that through increased awareness of self and others, understanding and acceptance of differences, connectedness between faith groups and cultures can be fostered. True to the volitional dimension, we hope that this paper catalyzes interest and the willingness to look at old concepts in new ways. And finally, regarding the spiritual dimension, we hope to have presented compelling arguments for the importance of including this dimension in the study of organizational change. Additionally, we wish to point out that we are well aware of the fact that culture and religion are continuously impacting and shaping each other, and that we are in no way attempting to separate the two. Since this paper constitutes work in progress, we are inviting feedback, criticism, suggestions and additions.

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A Nine-Month Follow-up Assessment of a Large Scale Interactive Event Designed to Implement Organizational Change in a State Government Organization

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A follow-up study was conducted on a state government organization that had employed a large scale interactive event (LSIE) to implement organizational change after a merger. Much information about the organization was collected during the LSIE. Some changes resulted from the LSIE, but some of the changes had been planned before the event. Feelings about the LSIE were largely negative except for those in leadership positions. HRD professionals may benefit from this study's recommendations for improving how LSIEs are conducted.

Keywords: OD, Change, Systems

Leaders in all kinds of organizations have to deal with change. Change occurs for many reasons, including technology, globalization of the economy, and changes in demographics (Merriam & Caffarella, 1991; Nutt & Backoff, 1994). State services have to deal with the same economic, political, social, and technological forces (Menefee, 1997). Managers often seek help from organization development (OD) consultants for help in implementing and maintaining change. OD consultants are constantly looking for innovations to cope with change and to implement change efficiently and effectively.

Recently, OD consultants have devised new methods of implementing changes that are aimed at shortening the time it takes to effect change by focusing on the entire system rather than on individuals or groups of individuals. As observed by Bunker and Alban (1992b):

> In organization development (OD) practice we have been impressed and excited by what appears to be a new type of social innovation occurring all around us. We are speaking of several different types of work with whole systems that is (sic.) emerging in a variety of forms. (p. 473)

In this study, whole system means the entire organization, including all departments, the relationships that exist between the departments, and the environment in which it operates. The environment includes (but is not limited to) consumers of its services. One way of implementing change is the use of Large Scale Interactive Events (LSIEs). These events are attended by as many as 1,500 people (Sullivan, 1997), all meeting in one place for a two- to three-day period. In such an event, participation is extended to all possible stakeholders--employees, shareholders, customers, and suppliers.

Background of the Study

Working with the whole system in the implementation of change appears to have begun with the work of Emery and Trist in Britain in the late 1950s and early 1960s (Purser, Cabana, Emery, & Emery, 1997). They referred to their work as Search Conferences. The work of Rensis Likert in the 1950's on survey research and feedback is also supportive of the idea of participative organizations (Rothwell, Sullivan, & McLean, 1995). Before then, OD interventions had targeted individuals or departments, resulting in gradual manifestation of change in organizations. Since the 1970s, the use of LSIEs has grown phenomenally (Bunker & Alban, 1992b). This is evidenced by the increasing number of OD consultants making reports of having used various types of LSIEs.

Purposes of the Study

As with all organizations, state government organizations find themselves having to cope with rapid changes. These changes may result from new regulations, dwindling funding, or political crisis. A state government organization in Minnesota held a three-day LSIE to implement organizational changes after a legislative mandate to merge

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organizations. A case study was conducted by the researchers during and one month after the LSIE (Kamau & McLean, 1998).
This is a follow-up study with the following purposes:

1. To validate the research findings of the first phase of the case study on the use of a Large Scale Interactive Event to institute change in the state government organization.
2. To document the feelings of the research participants approximately nine months after the LSIE.
3. To document the changes since the LSIE was held.
4. To solicit advice about holding LSIEs, from the perspective of a nine-month interlude.

Need for the Study

There has been a great deal of activity in using LSIEs in the public and private sectors (Nutt & Backoff, 1994; Purser et al., 1997; Sullivan, 1997). Bunker and Alban (1992b) alluded to OD practice being atheoretical today and called for interaction between theory and practice. Research should be conducted to address that imbalance where practice is not supported by theory.

An earlier study by the current researchers (Kamau & McLean, 1998) involved observation of the planning process for the LSIE, observation of the LSIE, and interviews with 22 participants one month after the LSIE. It was found that there was free interaction during the LSIE and high expectations of what could be achieved, but there was a slow pace of implementation of the resulting recommendations. It was also found that there was minimal individual and organizational change immediately after the event. Persons had volunteered to participate in the follow-up activities, but there was little action during the first month after the LSIE. There also existed consultant-client incongruencies over the duties and responsibilities of the consultants regarding the follow-up activities.

There is need for this study to confirm or refute the findings of the earlier study and to identify the feelings of the research participants nine months after the LSIE as a next step in a longitudinal study of the effects of an LSIE.

Significance of the Study

Organizations are systems, yet they are built on individuals--individual chief executive officers, individual managers, individual employees, individual shareholders, and so forth. Thus, it is important to study organizational change as a whole, while also exploring the experiences of individuals experiencing change in that organization. Much of the writing on LSIEs is based on reports of what happens during the event. The earlier Kamau and McLean (1998) study reported on the planning for the event, the feelings of participants about the event, and the changes that followed. This study was intended to validate the earlier findings, but, more important, to identify participant reactions and what happens nine months after the event, as part of a broader longitudinal study about the effects of LSIES.

Research Questions

The central question for this research was: Reflecting back nine months, how did the LSIE influence organizational change? The questions in this phase of the research were:

a. Comment on the summary of the findings of the first phase of the research.
b. What are your feelings now concerning the large group interactive event?
c. What changes have occurred in the organization since the LSIE?
d. How do you feel about those changes?
e. If there were another large group interactive event, what advice would you give to the organizers?
f. What final comments would you like to add?

Constraints of the Study

This case study, as with all case studies, involved participants from one organization experiencing the same LSIE. Their experiences could well be very different from experiences in other LSIEs and in other organizations. Thus, this study focuses specifically on this LSIE and this organization, without any intent to generalize more broadly. Further, as in any use of interviews, the interviewer is necessarily imposed into the study, both in influencing the responses and in analyzing transcripts.

Literature Review

There has been a recent influx of LSIEs aimed at working with a whole organization to institute change. Such interventions use various names: Search Conference, Future Search, Multisearch, Future Search Conference, Conference Model, Simu-Real, Open Space Technology, Appreciative Inquiry, Work Out, Fishbowl, Real Time Strategic Change, Large Scale Interactive Events (Brigham, 1996; Klein, 1992; Purser et al., 1997; Sorensen, Gironda, Head, & Larsen, 1996; Weisbord & Janoff, 1995).

Characteristics of LSIEs

The primary strategy utilized by all of these variations is the involvement of large groups meeting in one place for two or three days. LSIEs are based on the principles of small groups (Dannemiller & Jacobs, 1992; Emery, 1992), though the number of people in the groups could be very large, ranging from as few as forty to over two thousand, all meeting in one place for two to three days. There is, however, no agreement about the minimum or maximum number of participants (Dannemiller & Jacobs, 1992; Gilmore & Barnett, 1992; Purser et al., 1997; Sullivan, 1997). Some OD consultants utilizing this strategy suggest a minimum of 100 and others mention 300. There appears to be no claims as to the maximum number of participants, nor any extant research to support a claim of an optimal number.

A second characteristic is that LSIEs target the whole system as opposed to dealing with a single department or a group of persons (Bunker & Alban, 1992b). Thus, each small group in an LSIE is usually made up of persons from different departments and levels. This is referred to as max-mix in the jargon of LSIEs (Sorensen, 1996).

Third, LSIEs are democratic (Emery, 1992; Sorensen et al., 1996). Each person is given an opportunity to air her or his opinions. However, it is unlikely that the short time of the event will allow for a truly democratic atmosphere.

A fourth characteristic is increased commitment to change (Axelrod, 1992). If a person is a party to a decision, she or he is likely to be more committed to that decision.

Another stated characteristic is that LSIEs have greater speeds of implementing change (Axelrod, 1992). As LSIEs involve all parties affected by the change, commitment is achieved quickly, thereby reducing the time to implement changes.

A sixth characteristic is the development of working relationships that go beyond departments. As persons interact, they develop working relationships that would not have been possible without the LSIE (Bunker & Alban, 1992a).

Finally, LSIEs are interactive in nature (Dannemiller & Jacobs, 1992). Interventions are designed to allow interaction among persons of different departments and levels in an organization.

Other characteristics include consensus, collaboration, and shared ownership of decisions.

Concerns about LSIEs

Purser et al. (1997) have expressed their concerns about the number of participants in LSIEs:

> We suspect that these large group events might be useful for enhancing information sharing across boundaries, but we would be hard pressed to believe that the quality, depth of dialogue, and solidity of joint agreements around long-term purposes could be equivalent to a group of 35-40 participants which is the upper limit in a Search Conference. (p. 48)

While the authors are advocating for search conferences, it is easy to be sympathetic with their position. The large numbers of people and the compressed time for deliberations raise concerns for us as well. Might an LSIE turn out to be like a political rally rather than an effective tool for change?

There is a possibility of planning committees to fail to design an event that will serve the needs of the participants and their organization. Emery (1992), commenting on this possibility, wrote:

> All this is predicated on early and thorough planning and design that again involves understanding of the genotypical design principles. Until this under-standing becomes widespread through cooperative work, management committees will continue to design camels instead of race horses. (p. 532)

Emery was referring to management committees that institute fast changes in organizations using LSIEs.

Another concern related to LSIEs is the possibility of the "illusion of participation" dilemma (DeVogel, Sullivan, McLean, & Rothwell, 1995). An illusion of participation may be created when decisions are not actually made at the event but at another venue by different persons. It is possible that participants will not chart any change but may be used to "rubber stamp" decisions reached by a handful of individuals (say, top management). Bunker and Alban (1992a), for example, observed:

> The large group event is primarily an interactive planning event. When it comes time to make decisions, those with responsibility in the organization must take their decision-making roles again even if that simply means blessing what has already been done. (p. 585)

However, the decision-maker may decline to implement decisions reached in an LSIE.

It is evident from the literature reviewed that there are many OD consultants who employ various types of large scale interactive events in their intervention work. As long as practicing OD consultants continue to develop different intervention strategies, researchers will have to study the interventions (LSIE in this case) to add theory to improve practice. Knowledge about LSIEs will enrich OD theory and practice. Research about LSIEs is needed to confirm their benefits or allay the concerns raised about them.

Research Methodology

This case study is evaluation research utilizing phenomenology. Van Manen (1990) stated that "phenomenology must describe what is given to us in immediate experience without being obstructed by pre-conceptions and theoretical notions" (p. 184). This research was designed to collect accounts of persons who participated in an LSIE. Streb (1984) identified three stages in phenomenological study: making judgments, asserting the judgments made, and thinking about empirical categories. The researchers have described in detail the experiences and reflections of the participants, leadership of the state government organization, and the OD consultants involved in the LSIE (Kamau & McLean, 1998).

Research Design

The research was a case study of one state government organization headquartered in St. Paul, Minnesota. The research involved interviewing 21 of the 22 participants in the earlier study. The other research participant who would have been interviewed had left the organization. These interviews captured the participants' perceptions of and feelings about the event approximately nine months after the LSIE. While an interview guide was developed, the interviews were largely unstructured, with the participants being allowed to make uninterrupted responses.

Instrumentation and Validation

The study was designed from an interpretive perspective. Its validity is built on agreement between the researchers and the participants on the themes emerging from the discussions.

Analysis

Tape-recorded interviews were transcribed and hard copies made. A thematic analysis was made from the interviews and observations of the LSIE. The frequency with which a theme was repeated by the research participants gave the importance attached to the theme by the research participants. The eloquence of how the theme was put by the research participants was also important. Dominant themes were identified, summarized, fed back to participants, and then revised, as needed.

Comments about Earlier Research Findings

The research participants were given a copy of the results of the first study. Then researchers read a summary of the findings to the research participants. Their reactions were recorded as a validation of the earlier research study findings.

Findings

The results of the analyses of the transcripts follow.

Earlier Research Findings

All research participants agreed that the findings in the first study presented a true picture of the situation as it was one month after the event. One research participant said, "You hit it right on the nose." Another research participant said, "I think, in general, I would be inclined to agree with those statements." One participant pointed out that there was a max-mix table during the event that had six occupants, and occasionally it had fewer than six members during the LSIE. Another point concerned the hiring of an officer specifically to deal with the follow-up activities. It was nearly two months before the person could take office. Other than these concerns of omission, the research findings were validated by the research participants.

Changes Since the LSIE

There were some changes nine months after the LSIE. One research participant cautioned that the color of the sky is still blue and not purple even though changes have occurred. The changes that have occurred were the wearing of name tags, a receptionist at the entrance, establishment of intranet pages, "open days" for sections of the state agency (so people in other sections can visit and see what is done there), and a commitment to move into a healthier building before the end of the year. One research participant stated:

> There have been some groups working, and they have actually made some advances to the various needs we expressed down there. I look at some of the small things that have happened as very beneficial. There are not many of those but some.

Another said:

> Well, I have seen some changes. One of the things that comes to my mind is that each section had to have an open house. We had an open house. It was a very good turnout. So I have seen that part of it. Let's see here; name tags, we've got our name tags. They're really trying to implement, but it is a slow process.

Receptionist

In order for the agency to serve its customers better, it was suggested during the LSIE that there should be a receptionist to give directions to customers. This had been implemented by the time of the second round of interviews. One research participant thought that the changes that have occurred, including the receptionist, have been cosmetic.

Name Tags

In order for the agency to serve the customer better, it had been decided that name tags be worn. These have been made. Some employees display them on their chests. Others do not wear them (reasons for not wearing were not sought by the researchers). The introduction of name tags was as a result of the LSIE. The staff in the field office that the researchers visited did not have name tags. The name tags were also referred to as cosmetic by the same respondent quoted above. This is what he said:

> I do not think they made an effort to respond to the things that came out of the meeting. Like I mentioned before, the name tags, things of that nature which are cosmetic on the surface...

Intranet Pages

Before the LSIE, information about the agency was available on the internet. It continues to be available there. However, there is information that needs to be available within the agency only because of the security of the information. Because of the need to inform more people, and at the same time maintain security, the technology department responded with the development of intranet. Different intranet pages (available only to those in the agency) have been developed. The development of intranet was as a result of the information collected during the LSIE.

Commitment to Move

The current facilities for the agency have been condemned as an unhealthy environment. There is now commitment (lease agreement signed) to move into another, healthier building. Some research participants looked forward to moving to the new address. Others expressed concern about increased commute time, the customers that they serve, and office space--cubicles instead of solid walls. One participant said:

> We will be moving from what used to have offices to cubicle type arrangements. I have a feeling that there is going to be a lot of adjustment from a personal level in terms of noise level and proximity with other people. (but added) There are those who say that it might lead to a more open communication and better interaction.

The organization would have moved to a new location with or without the LSIE. However, some research participants think that the LSIE accelerated the movement.

Feelings about the LSIE

Feelings about the large scale interactive event were varied with participants expressing both positive and negative feelings as depicted by one research participant who stated:

> I have mixed feelings. I guess first of all my negative feelings are there was a lot of time that was taken away from the workplace; therefore, it should have produced more than it has. The positive side of it was it was the chance to communicate with co-workers in a different location, and find out different working environments and what they are like.

The participants acknowledged that some changes had occurred as a result of the LSIE but added that some changes would have come anyway. Moving to a new address is one of the most significant changes. It was intimated that it would have happened with or without the LSIE. However, some changes were as a result of the deliberations at the LSIE.

The research participants reported that there was a notable absence of visibility of some key persons in the organization. They believed that more would have been achieved if more of the executive team were more visible along with the one person responsible for planning and implementing the organizational change. They also said that the management layer may have been less committed to the changes. It is this management layer that would not be affected by political changes. Therefore, had these people been spearheading the organizational changes, then more would have been done. This is not to say that changes have not occurred, but they have not been extensive.

Advice about the LSIE

The research participants thought that the LSIE was best suited for delivery of information. It was least suited for strategic planning. The most repeated concern was the length of time it took--three days. Most research participants were concerned that three days were too long for their customers to go without service. One of the agency's field offices had hired temporary staff to offer basic services during the LSIE. One day was suggested for any other LSIEs in the future. One research participant would rather there be no LSIE, and, if there must be, then "let it be for a half a day." Another research participant stated:

> Just don't make it three days in a row. Because three days to absorb all that is being given to you, taught to you, shared with you, was just a lot! So maybe not three days back to back.

Internal Follow-up Survey

The client organization surveyed 187 persons and published its results approximately eight months after the LSIE on matters related to the LSIE and the follow-up activities. On a statement, "Multiple-day agency wide meetings are useful," 31% of the respondents strongly agreed or just agreed compared to 55% who disagreed or strongly disagreed. Strongly disagreed was selected by 29% compared with 5% who strongly agreed. The remaining 14% gave either invalid responses or "don't know" (source excluded as it would reveal the identity of the client organization). One research participant summarized the situation at the client organization like this:

> I am working with people who volunteered. They are pretty optimistic that things can change. But, outside that group, the majority of what I hear has been negative. Things like the event was a waste of time, and why do we do these things?

Conclusions, Implications, and Recommendations

Nine months after the LSIE, the research participants still remembered the event. The LSIE had resulted in an acceleration of some changes. It can be said that the information gathered during the event led to a better understanding of internal and external customers.

The time spent (three days) on the LSIE was considered to be too long, and the research participants would have preferred a shorter period. LSIEs should focus more on gathering and delivering information rather than formulating strategic plans.

A power base that will endure over time in an organization should be identified and targeted for implementation of organizational change. In this case, the management team should have been involved more in the planning and the execution of the LSIE. The management team was considered more permanent than the "genuine, but transient" executive team.

Most of the changes that occurred in this organization would have occurred with or without the LSIE. The changes that occurred as a direct result of the LSIE were considered "cosmetic" by some research participants.

From this study it was found that the value of holding an LSIE lies in the information that is collected. The participants are able to give information more freely in an LSIE. It is important to analyze and use that information properly. It is also possible to use LSIEs to deliver information (such as policy matters) to a wider audience in a participative manner.

OD consultants planning on using LSIEs should spend more time on the implementation phase following the LSIE rather than assuming that change will be achieved during the event. Information collected during an LSIE can be overwhelming to the client organization and help is needed to analyze the information and arrange it in a meaningful and useful form. When internal OD does not exist, an external OD consultant should plan on spending more time to help with follow-up activities. Planning for follow-up activities is as important as the planning for the LSIE itself. OD consultants should anticipate the problems organizations may encounter and coach the leaders accordingly.

Much more research is needed, using a wide variety of LSIEs in a range of organizational types. Another possibility is to research organizations long after the LSIE to document the impact of LSIEs on the operations of an organization. The ongoing research into this organization will provide one set of longitudinal results.

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What is it Like to be an Independent HRD Consultant?

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This phenomenological study investigated the experience of being an independent HRD consultant. In-depth interviews were conducted with ten successful HRD consultants. Eight themes emerged and are presented here: freedom, flexibility, and control over one's destiny, time, and income; enjoying one's work; learning and exploring a variety of new things; responsibility; embracing the tenuous nature of things and coping with uncertainty; marketing, partnering, and referrals; working long hours; and focus.

Keywords: Independent Consultant, Contracting, Human Resource Development

Recent trends in the U.S. business environment--re-engineering, outsourcing, elimination of multiple layers within business organizations--all lead to an increasing role for independent consultants and contract employees. Morrow (1993) wrote in his Time Magazine article: "America has entered the age of the contingent or temporary worker, of the consultant and subcontractor, of the just-in-time work force—fluid, flexible, and disposable" (p. 40). According to Pink (quoted in Carlson, 1997), the U.S. is entering a stage of a "Free Agent Nation," with 14 million self-employed, 8.3 million independent contractors, and 2.3 million employed by temporary agencies (p. E3).

The reasons for this change have been analyzed by Rifkin (1996) and Bridges (1994). Building on Zuboff's (1988) groundbreaking analysis of the current automation revolution and the way it changed the employment landscape, they argue that, among other things, the emergence of personal computers and communications technology improved personal productivity of knowledge workers, eliminated the time and space barriers, and made independent practice a reality for millions of people. There are also several other reasons for the increased use of independent contractors. A firm that is facing a turbulent, constantly changing environment (and today most sectors of the U.S. economy fall under this category) may derive substantial benefits from using contract workforce. First, this may reduce employment costs: external workers can be hired without increasing the cost of health insurance and benefits (Casey, 1989). Second, this reduces certain administrative costs, because independent contractors are responsible for planning and managing their own work (Belous, 1989). Third, contract workers can be hired without an expectation of long-term employment and can be let go without tarnishing the firm's image (Belous, 1989). Fourth, use of contractors can offer a firm a way to access highly specialized skills on an as needed basis for only a short period of time (Davis-Blake and Uzzi, 1993). Belous (1989) reported that using independent contractors allowed firms in a number of industries to offer a wide range of products without a large and risky investment in expensive permanent labor.

As for the use of HRD contractors, in recent years HRD has become one of the most outsourced of corporate functions. A 1997 overview of corporate HRD trends (Bassi, Cheney, & Van Buren, 1997) called outsourcing HRD the "growth industry of the nineties" (p. 52). The authors indicated that, though outsourcing all training is rare (3% of firms surveyed by the Manufacturing Alliance in 1996), most companies (83%) were outsourcing at least some training (p. 53). Oberle (1989) pointed out that some organizations have been using contract trainers for years. Consulting firms like Kepner-Tregoe, for example, have employed them to deliver their programs since the early 1960s. However, in the 1980s this trend became much more visible: a survey by the Administrative Management Society revealed that 90% of respondents used temporary employees during the previous year (Oberle, 1989, p. 57). Oberle (1989) indicated that one place where temporary workers can be especially helpful is in training departments in firms where training needs can rise and fall quickly. Contract trainers are beneficial to companies because firms save money by avoiding paying for full-time workers in slow times.

The above overview suggests that many HRD practitioners are likely to face the transition from the role of corporate training professional to that of outside consultant. Hence, there is a need for better understanding of this phenomenon. However, most of books and articles on the topic of independent consulting either provide practical advice to consultants (Cook, 1996;. Cohen, 1990; Shenson, 1990), or describe competencies of HRD consultants (Eisen, Steele, & Cherbeneau, 1995; French & Bell, 1990). In my literature review, only a handful of sources described independent consulting as a way of being, explored the existential aspects of this phenomenon (Bellman, 1990; Block, 1993; Harrison, 1995). And of these, only one was based on a research study as opposed to the author's own experiences (Bianco-Mathis & Veazey, 1996).

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To close this gap, and to provide a broader understanding of the existential aspects of the independent HRD consulting phenomenon, the following research question was placed at the center of the present study: What is it like to be an independent HRD consultant?

Research Methodology

This study was based on *hermeneutic phenomenological research methodology*. A research methodology should derive from the question to be investigated. In the 1980s and the early 1990s, the debate between the proponents of the positivistic and interpretive paradigms in vocational education research demonstrated that there is more than one way in which to conceptualize and conduct educational research (Hultgren, 1989). Among other things, an outcome of the above theoretical discussion was the research community's acceptance of the notion that, when a study involves gaining an understanding of human experiences, one of the interpretive research methodologies would be more appropriate than a positivistic methodology. In essence, the differences between the interpretive paradigm and its counterpart, the positivistic paradigm, boil down to differences in their ontological assumptions. The ontological position of the interpretive paradigm can be characterized by the centrality of the idea of reflective, meaning-based interpretations of the world which human beings inhabit. This meaning-making activity is central to any conscious human activity because there is no "pristine, unmediated grasp of the world as it is" (Eisner, 1991, p. 46). The interpretive paradigm postulates that we do not have direct access to a singular and fully knowable external reality. All of our understandings, instead, are contextually embedded and interpersonally created. Thus, we are constantly trying to make sense of phenomena and strive to construct the reality from varied and ever-changing interpretations (Weick, 1993). There are two major ontological implications of the above characteristics of the interpretive paradigm. First, reality is plural, not singular. Since each individual is constructing his or her own meaning of reality, this subjective construction process will result in personalized, individual realities. The second implication of the interpretive ontology relates to the concept of the person's existence. In positivistic ontology, there is a one-way, direct relationship: the reality shapes the individual. In the interpretive paradigm, reality is actively shaped by the individual.

Hermeneutic phenomenology is both descriptive and interpretive (because any facts of lived experience are always already meaningfully experienced) (van Manen, 1996). In hermeneutic phenomenology the understanding of the lifeworld of a person emerges from the interpretation of texts and/or conversations with the person whose lifeworld is studied (Clifford, 1988). As a practical method of gathering narratives, I used conversational interviewing (van Manen, 1990) in which the researcher is a conversation partner with insiders, persons with lived experience of the phenomenon being studied. This method requires inductive work, creating a picture out of the analysis of the narratives rather than setting out to prove hypotheses.

Participants

I interviewed ten volunteers from my pool of contacts through the University of Minnesota's HRD department and through my job. The participants' ages ranged from 36 to 50 years. The interviewees had varying lengths of consulting experience, from veterans with more then 10 years in HRD consulting to those who had started within the last two years. The consultants represented various areas of HRD: organization development (OD), training design and development, standup training, and evaluation research. All participants were at the time of the interviews independent contractors: working on their own (as opposed to being a part of a larger consulting organization), and doing consulting as their major job (as opposed to providing consulting services in addition to some other full-time job).

The Researcher

Knowledge of the researcher background helps the readers of an interpretive study understand better the interpretations made. I have about 17 years of HRD and management education and research experience, including several years of managing needs assessment projects, job task analysis, program design, and training development. My experience as an independent consultant includes contract development of computer-based training programs, management consulting to emerging companies, and subcontracting with an expatriate management training firm. In my research, I assume that jobs and their characteristics are social constructs created by the interpretations of individual participants in the work processes, who actively create the reality they inhabit and share a common frame of reference (Gioia & Poole, 1986). Therefore, in order to understand what kind of work relationships will be created by people, we need to understand how they experience their surroundings and daily lives in terms of time, space, their own being, and their relationships with other people and the surrounding environment.

Interviews

Individual interviews (ranging from 60 to 90 minutes in length) were conducted with each participant. All ten interviews were tape recorded. There was an interview guide which I utilized during the first round of interviews. The guide included four questions. First, there was a general question about the participant's background: How did you become an independent consultant? If asked to elaborate, I added that I was looking for information on their previous work experience, and the events that lead them to become what they are now. The second question was formulated as follows: What do you do? Describe your actions during a typical project, a selected moment in your practice, or a memorable event that happened to you. My third question was: What does being an independent consultant mean to you? Question four was open-ended: Do you have any other observations to make that would help me understand what it is like to be an independent consultant? What advice would you provide to a person who is contemplating an independent consulting career?

Text Analysis

The tape recordings of the conversations were transcribed verbatim. The data were analyzed by focusing on themes that emerged throughout the conversation. Essential themes, according to van Manen (1990), are "aspects or essential qualities that make a phenomenon what it is and without which the phenomenon cannot be what it is" (p. 107). The interview texts were analyzed utilizing the selective or highlighting method proposed by van Manen (1990): "In the selective reading approach we listen to or read a text several times and ask, What statement(s) or phrase(s) seem particularly essential or revealing about the phenomenon or experience being described? These statements we then circle, underline, or highlight." (p. 93) Next, I developed a "mind map" for each of the interviews (Buzan, 1991). Major themes that emerged from the analysis were color coded both on the interview transcripts and on the "mind maps." Further, I created a composite "mind map" for the whole group and a master list of themes. Finally, I began writing about the themes. During this process I was constantly referring to "mind maps" and transcripts. In the process of writing, changes were introduced into the themes several times, due to re-conceptualizing and combining. The preliminary results of the analysis were validated by sharing a summary of emerging themes and metaphors with the interview participants and soliciting their comments during the follow-up phone calls or meetings.

Themes

My analysis produced eight themes: freedom, flexibility, and control over one's destiny, time and income; enjoying one's work; learning and exploring a variety of new things; responsibility; embracing the tenuous nature of things and coping with uncertainty; the relation between marketing, partnering, and referrals; focus; working long hours.

Freedom, Flexibility, and Control over One's Destiny, Time, and Income

The common thread for this theme was consultants' greater ability (compared to corporate employees) to utilize their talents, expertise, and time available in achieving their life goals. These goals are different for everybody (and they change as a person progresses through the life stages): it might be personal, spiritual, or professional growth, ability to provide an adequate lifestyle for their family, or enough parental attention for their children. It seems that independence from a corporate structure provides significant advantages in achieving the above goals. These advantages come at a cost, however: life is less predictable, and income levels might fluctuate significantly. Therefore, a realistic assessment of one's goals and means is necessary. Control over one's destiny was important to all of the participants, but for a variety of reasons. In addition to the opportunity for self-actualization that this control brings with it, there are two other important aspects: flexibility with time and income. For some, flexibility with time results in higher income potential, allowing consultants to be more productive: "I am more valuable thinking in the morning than in the afternoon: I can have twice as much done if I work in the morning. So I developed a schedule allocating mornings for certain kinds of work, and afternoons for meetings, because my clock tends to work that way."

Enjoying One's Work

This theme could be found virtually in all of the interviews. One of the participants said about stand-up training:

> "I do it naturally; once I am into it, I feel in complete control; I can go for 10 hours, and I don't realize how the 10 hours have gone by. I wish I had fifteen hours. I enjoy it tremendously, and I am good at it."

Ideally, anybody should enjoy their work, both the self-employed and corporate employees. However, it seems that, for independent contractors, enjoying their work is even more important:

> ...when you are self-employed, you have to be in the realm of doing something your heart is into; otherwise, this is not going to work. If you are a plumber, but you hate plumbing, you are better off being employed by somebody than you are being on your own. You have to find some way to express that art, whether that will be going back to school, practicing art on the side, and so forth. Following your calling and finding work that is more fulfilling to you, you always have to be enjoying what you are doing. Otherwise, it's not worth it on the other end. All this hassle.

Learning and Exploring a Variety of New Things

Continuous learning and exploring new things is important for two reasons: in this constantly changing business environment, it is necessary to keep one's skills up-to-date; and learning seems to have an intrinsic value for most of the consultants interviewed by me, constituting an important part of the personal growth journey. Further, independent consulting, as opposed to highly specialized and compartmentalized corporate jobs, provides an opportunity for becoming a more rounded individual. This is achieved not only through structured learning, but through on-the-job acquisition of new skills, trying out new approaches and methods. My conversation partners pointed out that the nature of projects they work on is different from the corporate environment in one additional, important aspect; it has more variety. Working at a corporation, we see, most often, only parts of the complete picture. Independent consultants, on the other hand, are most often hired to deliver a complete, finished product, for example, to prepare and conduct a complete training program. As one of the participants put it: "I am enjoying it so much, mostly because it is so varied. I am doing design and project management. I develop a concept, script, the look of the project, where we need graphics, videos, write video scripts. I work with instructional designers and manage the project." She also associated the ability to do a variety of things with being a more rounded individual: "From the career perspective, what I like about it is that I am much more rounded, if you will." Further, participants pointed out that independent consulting work brings freedom to work on those aspects of one's profession that have been out of reach at a corporation. At a business company, given today's specialization and compartmentalization, it is hard to find a job that would allow someone enough flexibility to try their skills in all the different aspects of their profession. As one of the participants said: "I wanted to expand my horizon; my last employer focused on multimedia, but I wanted to do a variety of training projects. I actually wanted to do needs assessment and other aspects of training development."

Responsibility

Since a consultant is working mostly alone, she is ultimately responsible for the success of the project and for her own success as a professional. There is also a more direct, more visible link between her day-to-day actions and her income, health, and ability to retire comfortably. This responsibility can be a heavy burden, especially because one realizes that there is nobody else there to blame for mistakes. One of the participants put it this way:

> Nothing is set for you, nothing is pre-determined: your retirement package, your insurance, how much money you are going to make, how much time you are going to take off this year, what your rate is, what you have to do, what your assignment is. You have to get your assignment; you have to stir the pot to get it. If you want to change what you do, you have to change it yourself; you cannot go to someone else and say, "Hey, I want to change this, I don't want to do this job anymore, I want to do that job." Everything becomes your own responsibility: get your own cards, send your own invoices, call your own debts in.

Another interviewee stressed an additional aspect of the responsibility issue: "You have to be able to accept responsibility--there is nobody else there to take the blame." And one more excerpt: "... at a job you might be able

to share responsibility with somebody. Here you are alone. I could hire somebody to help me out, but I am a perfectionist, so it does not always work. And you have to do a lot yourself—even making copies, for example."

Embracing the Tenuous Nature of Things and Coping with Uncertainty

A realization that they have to face uncertainty and they have to face it alone comes to independent contractors early on:

> The downside is that you never really know what the future is going to hold. My luck has been holding out, but I often wonder if I went to a bank and applied for a loan, and they looked at my calendar, that after three or four months it would look like I am unemployed...it's not an overwhelming stress by any means, but it's always there. You are always conscious of the fact that you need to make sure that you are booked. It would be nice not to worry about that.

The first recipe for coping with uncertainty is to fully accept it as a part of being self-employed and stop worrying about it:

> You also have to deal with the possibility that this all can come tumbling down one day. You can lose your clients, and you can be badly underemployed. It's been helpful to me to embrace, very actively embrace, the very tenuous nature of everything that happens, of the temporary employment. If all of a sudden I walk into my client, and they tell me: "On Monday you are fired." I will say: "OK, I am fired. What's next? We will figure out something else."

The second recipe is to develop a contingency plan for the periods when the business is slow: this will not only allow consultants to be better prepared for unexpected downturns but, more importantly, will provide them with greater piece of mind and ability to concentrate during the busy periods. One of my conversation partners offered the following advice:

> If you are going to be self-employed, have a back-up plan. Say, "if I will not be able to find any work, let's say within three months, I am going to..." – fill in the blank. Paint houses, get temporary work, do something, because if you go some time without having worked, you can find yourself being emotionally affected by this. So you need to figure out how you are going to handle those down periods.

Marketing, Partnering, and Referrals

It was clear from the texts that, at the initial stages of the independent consulting career, marketing was one of the major concerns for all participants. Many indicated that they were concerned with this issue long before they went off on their own. Will I be good at marketing? How much cold calling will I have to make? How can I prepare myself to be a better marketer? These are the questions most of my conversation partners have been asking themselves. If marketing is understood narrowly as selling and using direct selling techniques (mailing, "cold" calls, etc.), then marketing skills are not an absolute necessity for an independent consultant. However, as my interviewees pointed out, marketing should be understood in a much broader sense; as developing a strategy for promoting oneself and exploring a variety of ways for reaching the target population. Using this broader definition of marketing, consultants have multiple tools for achieving their marketing goals: partnering with other providers of similar services; networking with peers and exchange of referrals with them; networking with former employers and customers; partnering with providers of complementary services (accounting, computer support, printing, etc.).

Partnering with peers and providers of complementary services is important for two reasons: as a source of referrals, and as a substitute for corporate support structures. Reciprocal exchange of services, advice, and moral support that this partnering generates plays an important role for an independent consultant who might, otherwise, feel isolated and resource-deficient. As one of the participants has put it:

> Most of the people in my position—single operators, small operators-- you get a few contacts, and then those contacts lead to other contacts. Not a lot of cold calling is going on, sending out brochures, and this kind of thing. Networking seems to be a much more powerful method than cold calling. And networking not only with clients, but with other providers in your position.

For most of my conversation partners, networking with other consultants was as important as maintaining a network of former and prospective customers. Networking with peers can be an important source of work:

> There seems to be enough diversity in business that people refer each other—"not me, but, maybe, her." And once you get this referral, being able to back it up by sending good materials. It is always very impressive when people can shoot out materials right after the initial phone conversation. "Here is a little bit about me, here is a newsletter." And this goes back to what we talked about earlier, having a target in mind.

Working Long Hours

Having flexibility with one's time does not mean having more free time. In fact, most participants stressed that they work longer hours than they used to work at their corporate jobs. The reason seems to be the necessity to do additional, mostly administrative, tasks, which, at corporations, are centralized and taken care of by support staff:

> "These things in a way can be sometimes perceived as negatives; when I can work, if I am busy doing everything but working. Copies made: I have a copy machine at home, but it's very slow' so if I need to have a 100 copies made, I go to Kinko's."

One of the interviewees stressed that he works longer hours but still believes that it is better than at a corporate job: "In the long run I probably end up working more that way, I work more hours, but it seems like I am working much less, because it's all flexible." Still another interviewee talked about two separate times a consultant needs: long chunks of uninterrupted time to work on projects, and additional time during the day or, possibly, night, to take care of the administrative and support functions:

> I put in an average of six hours every day where I work steadily. And then I do other things: I do the translations, I do the preparation of the development materials. I worked until 3:15 a.m. last night, but that was a rare one. I usually work until one o'clock at night every night. And it doesn't end. I do dinner with my wife, and we go for a walk, and then I go back to work.

Focus

The issue of focus versus diversity in one's job was discussed by many of my conversation partners. The consensus seems to be that you need to focus on certain aspects of your profession, on certain areas. Focus is important for a variety of reasons. First, customers prefer to deal with somebody who is an expert in something. And this something needs to be easily recognizable and tangible. Here is an excellent explanation of this:

> In the marketplace you will be hired to do a "thing." And so you have to define what a 'thing' is. And in the area of training and development design is a "thing," writing is a "thing," research is a "thing," stand-up instruction is a "thing." These are finite, discrete areas where somebody may say, we need somebody to write this, we need somebody to teach this, we need somebody to evaluate this. Management is not a "thing"—people are not going to hire you to manage anything, people skills is not a "thing"—it's nice to have, but nobody will hire you for just being a people's person, and so you have to recognize a half a dozen things that you are going to be hired for.

Another interviewee believes that, besides the credentials issue, focus is important for one additional reason: professional growth. She said:

> Be focused on what you do. I, for example, focus on training and development, and specifically on multimedia. Don't try to be all things to all people; you will spread yourself too thin. Also, focusing is important for your professional development. I try to do this yearly—learn new skills. I don't know how you can do that if you don't have focus. Think why you are doing it, and what your expertise is, what your focus is going to be.

Implications for Practitioners

The goal of an interpretive study is not to make generalizable conclusions. The implications in this section are observations based on specific experiences of a group of people. Experiences of another group of consultants may be different. Therefore, my goal is not to provide an advice on how to solve similar problems in any other settings. Rather, I attempt to draw the readers' attention to the existence of certain issues, and urge them to ask their own questions within their concrete situations.

The study findings should be of interest to both the independent HRD consultants and the corporate HRD executives and managers who utilize contract employees on various projects. *Independent HRD consultants* might find it beneficial to review their own lives and work, trying to identify some dominant or guiding themes. Comparing these themes to those identified in this study could provide them with important insights and food for thought. Also, it could be beneficial to talk to their colleagues, to discuss these themes at informal meetings of consultants' interest groups, to gain collective insights into the specificity of their practice and lives.

Given the widespread use of independent consultants by HRD departments of many U.S. corporations, the ability to manage these contractual relationships becomes an important skill for any *HRD executive*. And this ability depends, in large part, on an executive's understanding of contractors' motivations, lifestyles, and modes of operation. For example, do these consultants follow a focus strategy, or are they equally good at several things? Do they have strong self-discipline? Do they prefer to work from home, or will they want to work at the client's location? Answers to these questions should provide an employer with information to assist in deciding whether there is a good match between a consultant's style and the organization's preferences. To obtain the above information, an employer could conduct interviews with prospective consulting service providers asking open-ended questions to solicit descriptions of past projects. These descriptions are much more informative in this case than evaluative statements.

Future Research Directions

The following future research directions can be suggested based on the study findings: studying consultants' networks; contrasting characteristics of an "organization person" with those of an independent contractor; and exploring the continuous learning aspect of consultants' lives.

Consultants' Networks

From the study interviews it became clear that partnering, networking, and referrals have a central importance for independent consultants, facilitating achieving the project goals and also providing a viable substitute for marketing and selling. This whole area deserves further examination. Among some questions to ask about this phenomenon are: What are the foundations and mechanism of partnering? Which partnering/networking arrangements work the best? Theoretical foundations for the proposed investigation can be found in the network analysis and theories of social exchange (Bradach & Eccles, 1989; Jarillo, 1986). Network analysis considers both the structure and the process of relationships that join individuals, groups, and organizations. The network model assumes that actors are not atomistic but exist within complex systems of other actors. It also assumes that economic institutions are socially constructed and influenced by the history and structures of personal relations and networks of such relations (Ben-Porath, 1980). The network perspective research focuses on describing networks of relationships in terms of their size (number of participants), density (a network where everybody knows each other has a high density), and distance (the number of persons a focal person has to contact to reach a specific person in a network). The same principles that are applied to the study of firm networks could be utilized in studying consultants' networks. Partnering and informal exchange arrangements described in this study can be viewed as networks, and their density, distance, and size can be analyzed. Further, the level of trust in informal exchanges of information and resources could be determined.

Contrasting the Characteristics of an Organization Person and Those of a Consultant. My study suggested that such characteristics of their lives and work as freedom and flexibility; control over one's destiny, time and income; and enjoying one's work are important for this group of independent consultants. However, it is not clear whether these preferences are unique to this group and whether they differentiate independent consultants from corporate employees. White (1956) analyzed characteristics of an "organization person," contrasting them with qualities of an independent artisan of the earlier years, and discussed a number of themes that, in his opinion, were descriptive of an "organization person's" life. Among these themes are: a quest for belonginness; a need for

security; striving for "good life" offered by corporate jobs; an ability to do something worthwhile. Knowledge of differences between the organization people and the independents may provide corporate executives and managers with a better ability to manage these groups, especially in situations when representatives of both groups work on the same projects. A whole set of questions could be asked about the difference between the "organization person" and an independent consultant. If it is true that the "organization person" strives for belonging and security, can it be that for those who opt for an independent life these attributes are not important? Further, if for both groups it is important to have an opportunity to do something worthwhile, than how do they define "worthwhile"? How different are these definitions for the two groups? Finally, if independent contractors leave their corporate jobs because of the conflict between their individual growth goals and the demands of the formal organization, can we identify specific characteristics of those who are more apt to abandon the formal structures? Can we learn more about the processes that lead to this decision, and about the amount of time this transition takes?

Lifelong Learning. Commitment to continuous learning was identified as an important theme both in my study and in the reviewed literature. Vaill (1991) pointed out that in today's rapidly changing environment lifelong learning should become a way of being for any professional. In a corporate environment, education and training are often part of a company's human resource development strategy. Therefore, many corporate learners participate in structured and managed continuous learning experiences. This is very different for independent consultants. They have to develop their own learning strategies, choose subjects to study, select learning methods, and determine how much time and money they should allocate to their education and development. An independent consultant matches the definition of self-directed learner proposed by Vaill (1991): a self-directed learner is a person "...having substantial control over the purposes, content, form, and pace of learning" (p. 59). To assist independent consultants in developing and implementing their self-directed learning strategies, we would need to learn more about their preferred learning styles, readiness for self-directed learning, and perceived value of the learning investment compared to other possible uses of their time.

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Virtual Learning Communities: Creating Meaning through Dialogue and Inquiry in Cyberspace

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This paper provides a qualitative analysis of the interactions that occurred within small groups in an asynchronous, web-based distance learning environment. Within the context of a graduate HRD course, students used action science tools of dialogue and inquiry to explore work-related issues. The findings suggest elements, presented as a model for further research, that contributed to or hindered the development of these groups as learning communities.

Keywords: Action Science, Learning Communities, Web-based Learning

Generative learning is a necessary component of the learning organization (Senge, 1990) and a vital part of the knowledge building process. The challenge is to develop organizations that are able to incorporate this process into their systems, creating the capacity for people to develop and add value to the organization. With knowledge becoming the basis of our economy (Stewart, 1997), effort toward developing intellectual capital as a tangible asset is being recognized in organizations that are adapting to the new realities. Collaborative work and learning environments are necessary to support generative learning.

Learning communities are learning environments premised on people sharing a set of common issues or problems and having the desire to learn ways to address them. Differing from the traditional ways in which teaching and training are often delivered, learning communities focus on the collaborative efforts of participants to build knowledge and develop skills through practice and to reflect on the knowledge they have constructed. Within both academic and corporate organizations, HRD professionals are working to adapt their methods to support communities of learners.

Technology is becoming an integral part of the collaborative work and learning effort in organizations, often creating virtual groups functioning across time and distance. Collaborative technologies (Roschelle, 1996), such as groupware, provide a dynamic process to support people in sharing experience through dialogue, inquiry, and "mutual knowledge" creation for the construction of "shared resolutions" to ill-defined problems (Schön, 1983). This type of technology helps to translate virtual groups into virtual learning communities, offering both a means and a solution for sharing experiences, building and capturing group knowledge, and improving performance in a distance environment.

The purpose of this research has been to explore the core dimensions that describe learning communities in a virtual environment and identify the important elements that contribute to or hinder the development of them. This paper offers a model of virtual learning communities developed after examining the interactions of the participants for evidence of team learning and collaborative knowing, exploring the group dynamics exhibited in the virtual environment, and identifying the meaningful factors evident in these processes.

Framework of the Study

In the fall of 1998, the predominately experiential graduate level course, "Cross Cultural Perspectives on Reflective Technologies in Work-based Learning", was taught jointly by The University of Georgia and the University of Manchester. The purpose of the course was to create a working laboratory using T-group experiences and action science case work to explore interpersonal competence, to facilitate group learning, and to begin to conceptualize how individuals and organizations can be changed by confronting and transforming defensive routines.

The course was designed with one week of intensive face-to-face (F2F) sessions, held in Manchester in October, followed by seven weeks of small group case work on the World Wide Web. Participants built on the

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T-group experiences of the first half of the week with work in small groups on their own cases of problematic work -related interactions during the second part of the week. This F2F experience formed the basis of the distance component. The course involved students and professors from different cultures who had varying degrees of knowledge about the course content and methods of delivery, as well as diverse personal work experience. Some of the participants at the University of Georgia did know each other from previous classes, but for most this course served as the introduction to each other as well as the course content. There were 15 students from the two universities: 8 women and 2 men from the United States, 1 man from Jamaica, 1 woman from Malaysia, 1 woman from Holland, 1 man from Libya, and 1man from Botswana participating in the course. The UK lecturer and his British female research assistant were participants in the on-line casework. The action science casework was facilitated by one female and one male professor from the United States. Participants were assigned to small groups for the action science case work following the T-group sessions in Manchester, with an effort to achieve diversity based on gender, and nationality, confidence and skill. The three groups were formed.

Presenting action science cases in the second part of the face-to-face component provided preparation for the work that would be the focus of the distance portion of the course. Working as small groups on the web, the learners used the action science tools of inquiry and dialogue to address issues in their own individual case studies. Each group member presented his or her own action science case for discussion for a one-week period. A group mapping session and a week of final discussion concluded the course for a total of 7 weeks of on-line work. Participants worked both asynchronously and synchronously on the web during this time. At the mid-point and end of the course there were synchronous meetings of the entire class on the web.

Theoretical Framework

Virtual learning communities offer a new way to integrate work and learning. They strive to provide active learning opportunities linked to real-world experiences in which the learning can be defined as the activity through which new collective knowledge is built by its members for itself as a system (Kasl, Marsick, & Dechant, 1997). The conceptual framework of this paper is based on these three related areas of research: action science theory (Argyris, Putnam, & Smith, 1985; Brooks & Watkins, 1994); situated learning (Brown, Collins, & Duguid, 1989); and, the dynamics of team learning (Kasl et al.).

Action Science

Action Science was both the substance and the methodology of the CMC component of this course. As the technology practiced during the course, action science has been described as the science of interpersonal action, and is *"centrally concerned with the practice of intervention"* (Argyris, Putnam & Smith, 1985, p. 35) into frequently mismatched espoused theories and theories-in-use.

Development of skill in action science is to develop reflective capacity, not only reflection-on-action, but also reflection on reflection-in-action. This can be achieved by making theories of action explicit, through the presentation and inquiry into case studies. As such, action science is located in the real world of the students' experience. What is of greatest value is access to and participation in knowledge situated in practice, and the basic unit of support is the small group that serves as a valuable resource in learning.

Situated Learning

Theories of social constructivism and situated knowledge (Brown & Duguid, 1991) offer that learning in the workplace is motivated primarily by everyday dilemmas and needs experienced in work activities and that people receive the greatest value from access to and participation in knowledgeable practice. This engages participants more actively in their learning while concurrently developing social skills of negotiation and consensus building. People are viewed as members of a common discourse community that work together to solve common problems through the collective understanding of all (Hamilton, 1994), and that knowledge building is an essentially social process (Ernest, 1995).

Situated learning is one way of reconceptualizing education (Brown et al., 1989; Lave & Wenger, 1991) to view learning as situated in communities of practice, and that becoming a member of a community entails learning the skills and culture of that community. Lave and Wenger suggest that practice is the most "fruitful" way of learning. This view is important to the general recognition that mutual assistance is a valuable method of user support, and fits well the concept of learning communities that seek to provide mutual support for learning experiences.

Knowledge is thought of as the ability to participate meaningfully; learning is seen as the process of becoming a member of the working community of practice; and tools are reconceptualized as resources that facilitate integration and interaction within the group (Jordan, 1996, p. 22).

Team Learning

Moving beyond the focus on team orientation to tasks and social behaviors, Kasl et al. (1997) provide a description of the dynamic team learning processes defined as an interaction of thinking-acting. These processes operate on a continuum of individual - group interaction, and as the focus moves from framing learning in the individual's perspectives to a synthesis of all the members' views, the learning changes from learning by the individual to collective learning and mutual creation of knowledge by the team. The synergistic mode of learning, characterized by the team's ability to frame issues and challenge deeply held assumptions, describes the type of skills valued in organizations to help people deal with change and ambiguity in their environment.

Research Questions:

This paper describes a qualitative case study with a focus on identifying the important elements that contribute to or hinder the development of the virtual learning communities. Three research questions were addressed in this study:

(1) What types of learning and meaning-making were found within the virtual groups?
(2) What types of group interactions were evident within the virtual groups?
(3) What were the essential characteristics that appeared to promote or impede the development of learning communities?.

Research Methodology:

The primary data for this research were the verbatim on-line transcripts of the web conversations of the three small groups formed for the action science casework. The use of Facilitate.com web-conferencing software enabled the authors to "observe" group behavior and analyze the participants' "talk" to understand actions and meaning created in the virtual context of the web. The on-line work of this course provided approximately 250 pages of transcripts for analysis. Additional data from participant and facilitator observations, reflection papers, and course evaluations served as supporting documentation.

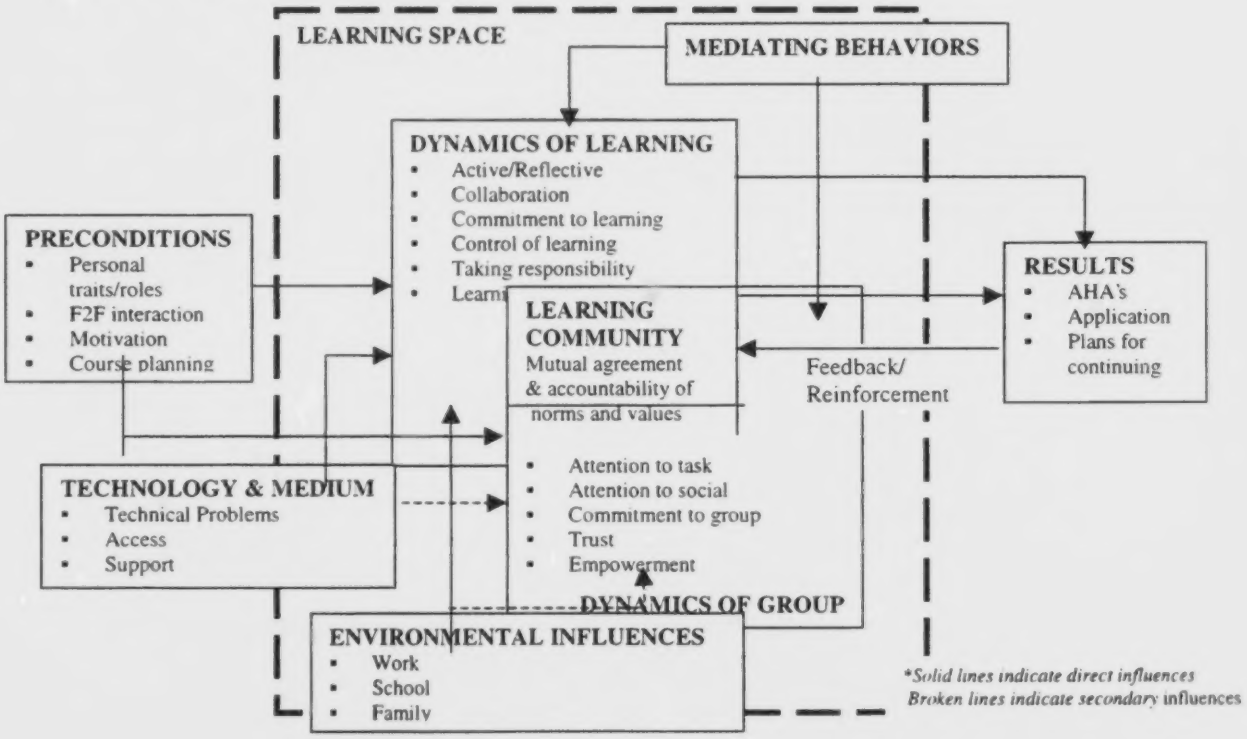
To understand the "what" of virtual learning communities, each group was analyzed as a case study, (Merriam, 1998; Yin, 1994) to focus on the "bounded" context of the small groups' on-line casework. The verbatim transcript of each group's on-line work on the web was analyzed from a constructivist perspective using conversation analysis in the constant comparative method (Corbin & Strauss, 1990) to develop categories related to the learning and group processes in the on-line environment. The text was viewed as "pieces" of conversation that built on one another to form patterns of communication and learning. The use of conversational analysis sought to provide a sociological approach for understanding the social organization and function of the groups. This methodology focused on the social aspects and natural data as a means of asking "what their order looks like and how it is put together by those who, in fact, produce it" (Button & Lee, 1987, p.3). The axial coding indicated categories were peer-reviewed for establishing trustworthiness of the analysis. In a cross-case analysis (Yin, 1981), categories were selectively coded as the elements that this research has tentatively described as core components of virtual learning communities.

The sample for this study was each of the three on-line groups. To establish their unique identities before leaving Manchester, the groups were named Arches, Doors, and Windows. The last two are based on the rooms they used during the T-groups, and Arches signifies an architectural feature used as a logo by both universities. Each group was asked to maintain the confidentiality of their own group on-line and to respect that of the others. There were general topic areas within the web conference that were available to all participants, including one for general discussion of the action science process, one with contact information for all participants, and one for an on-line conversation with Dr. Robert Putnam, a former student of Chris Argyris and an expert on action science. The two on-line sessions for the entire class and the work of the facilitators provided the common links among groups.

Findings and Discussion

Findings indicated that the virtual groups were most effective as learning communities when they acted from *mutually* established norms and values (either implicit or explicit) that governed both the learning and group behavior processes. Three contributing factors that influenced these processes from outside the distance learning environment were identified as pre-conditions, environmental influences, and results. Two factors integral to the learning environment were identified as learning dynamics and group dynamics. Technology and mediating behaviors/strategies were two factors that directly affected the dynamics of both group and learning processes, but in ways that could either support or hinder the processes of a group. These are presented in a model (see Figure 1) that shows the contributing, core, and mediating factors that existed in these virtual communities.

Figure 1. Model of a Learning Community



Types of Learning and Meaning-making

Findings revealed that collaborative learning and knowledge building (See Table 1) did occur within all of the groups on some level. The skills of dialogue and inquiry supported efforts in making connections within individual cases and across the work of the group, particularly when synthesizing work on a theory-in-use (TIU). This sometimes was as simple as asking for consideration of an overlooked idea, to pulling together the assorted thoughts of all of the group's members for a TIU, to making connections and recognizing patterns in previous pieces of information that become the foundation for new approaches to the issue. The more powerful instances of group learning, however, occurred when a group's efforts helped uncover and make new meanings of the work not only for the case writer but for the whole group, as in this example:

.... J wrote: I feel these two case studies and the interventions have been and are leading me to take a closer look at my internal conversations and with practice increase my effectiveness [sic] within groups. I have

experienced some tough moments but that is good. I'm ok. I have been really surprised at how much this has affected me emotionally. Some nuts are hard to crack. I'm still laughing at M's quote, "Are the voices in my head bothering you?" What a line! I feel like as a group you have done an incredible job of using the scant data I provided to making inquiries, attributions to get at some of these issues of mine. (I [k]now where some of the selfdoubt comes from. Thanks again for your thoughtfulness [sic].)

.... M followed with: I'm shutting down on this case and just wanted to thank J for working so hard this week, and I want to thank all of my fellow case workers for teaching me yet again how rich a case is when you look at it with a discerning action scientist's mind.

And another exchange:

..... M wrote: I tried to develop a Level II inquiry in studying my case this week. A Level II inquiry (I'm making this up as I go along--with a margarita by my side) is more open, more directed at uncovering feelings of the otner. . . . What I'm espousing is that Level I inquiries should follow any attribution or advocacy. Level II inquiries need to happen early in the transaction so you know what constitutes win-win. Without the Level II inquiry, you only have enough data to go for win-. This sounds incredibly preachy, please remember that I'm talking to myself out loud in a room of onlookers. (Are the voices in my head)

.... J responded: Some day someone is going to say, "Yes I wish you could keep it down in there." Actually, what's happening lately is my head is trusting my mouth more. I like what is happening though. . . . My sense is my interactions are becoming more Model 2 . . . what I sense in me is openness, authenticity and hopefully movement toward learning instead of just quick, efficient wrap-up.

In addition to the collaborative learning efforts that were so much a part of the group interaction, there was also evidence of other types of group learning: the learning with each other and from each other when particular skills or strengths of one member were recognized; and peer tutoring and coaching that went on within groups, especially with learning about the tools and processes of action science. The learning was experiential as people tried new techniques and new tools with the support of the other group members. It appeared that the greater the commitment of the group to the process and the greater the level of trust in the group, the more willing individuals were to learn in these ways.

The personal learning of participants was often based on off-line reflection on the work that was occurring on-line. Time for reflection is one of the benefits of virtual learning environments and particularly applicable for this type of content. Participants often mentioned "going to sleep on it so that I can take some time to reflect" and "I also notice in rereading the transcript that I attend to input and suggestions better in the reflective mode of reviewing the transcript. Part of this may be caused by my lowered defensiveness now that I've accepted conclusions they were leading to." Time for reflection was also perceived as a downside to the casework when one person said. "I've never done this much reflection on one issue in my life! Give me Manchester anyday [sic]. We were done in what. 2 hours?"

Types of Group Processes

Each group engaged in their own set of behaviors and established a unique identity that was largely the result of the group dynamics (See Table 1). Commitment to the group and to the learning seemed to be salient features of the high performing groups and made many of the group dynamics transparent. The two issues that seemed to be critical but that detracted from the performance of the groups were agreement of an acceptable level of participation and engagement with the group and the "silence" of members who were not openly committed to the process.

One group raised the question about levels of participation but never agreed on a group norm:

.... M wrote: I have to be more upfront about my concern, which is mainly about the level of activity here in this group. I am frustrated at the low level and a general lack of emotional engagement and commitment. I am misreading this? Do those of you who are here on a regular basis share my concern? It *is* a difficult medium, but it is made more difficult by silences.

.... R responded: M, I too feel that perhaps we aren't as active as we could be. But I am OK with it.

The issue of silence by a group member was related in this posting:

.... V wrote: Thank you H for giving an honest reaction to the things that we've said here and that we perhaps 'lived through' during the case weeks. I appreciate that very much. Of course your 'silence'

> reminded me also very much of T-group. And again, like in T-group, my reaction is that yes, you do have the right to be silent and I (we?) do not wish to push you, to oblige you to participate more in the dialogue. But (and I must have said this somewhere before, perhaps in the last days of M's case), although you might be learning loads, we cannot enjoy your input (and this is even stronger in cyber than f2f, because here we cannot even see that you're following the case in the first place). I honestly found your questions and comments, when they were there, often insightful. With the consequence that if you were not there, I missed these insights.

For those who were engaged in the process, it was addictive, "This gets addictive, I can't wait to get back to the PC and see[n] what's going on in the case!" and empowering, "For me to be able to do this is very empowering, that is one of the reasons why I am finding this addictive. It is interaction at quite another level from any other I have." The more open and effective a group was able to deal with conflict, the more constructively it was able to delve into the sensitive areas of an individual's learning. Trust was an essential component of the group dynamics.

Groups also had fun. The more engaged they were in the process, the more they seemed to be able to relax and enjoy the hours they spent communicating via the Web. This frame of mind is illustrated by these comments: "want to meet in chat room??? - M ..... I love this stuff!! See you there. - A" and "K, we might be on at the same time. I'm going to go over to the chat room. Come over and visit with me while I have my morning coffee. - M" And they expressed their like for each other with a great big cyberspace hug: (((X))).

Table 1. Direct Factors in the Development of a Learning Community

Group Dynamics	**Learning Dynamics**
• Attention to task management	• Mutual agreement & accountability of successful learning experience (participation & goals)
• Attention to social needs	• Active/reflective learning processes
• Mutual agreement & accountability on group norms and values	• Collaboration
• Engagement with group members	• Knowledge building / making meaning
• Commitment to others (being there)	• Feedback
• Expressed care about people	• Inquiry with data
• Awareness of group needs	• Engagement with content
• Role development	• Sincerity-honest questions & answers
• Creating presence/recognizing absence	• Responding to others
• Cross-cultural influences	• Use of metaphors
• Developing own language	• Use of language of content
• Personal sharing	• Control of learning
• Celebration	• Meta-inquiry
• Closure	• Sense of purpose
• Fun	• Peer tutoring/coaching
	• Using each other's strengths

Essential Characteristics That Promote or Hinder Development of Virtual Learning Communities

The essential characteristic that defined a learning community appeared to be the fusion of the learning and group dynamics of group into a core set of shared values and norms agreed to and accepted by the group. Within the learning space, groups could address the learning processes necessary to complete the work for the course. They could also address group process issues as they chose. However, a learning community was evident only when the processes from each of these areas were combined into the fabric that defined the group. An exchange between two members of one group illustrate the power of being a learning community:

> ... K wrote: We are on a train, whether we go through green fields, deserts, mountains or cardboard cities we are always moving. Whether the learning is obvious or obtuse, hard or easy we have kept learning and none of us has got off the train.
>
> ... J responded: I very much like the visual of the train because of its connectedness and also because it moves a[t] varying speeds. I am also thinking of a mode of travel with no tracks or a destination - kind of like the Enterprise. I feel like I've been beamed up on several occasions plus there have been experiences during our cases I've stood back and asked "what planet am I on?" I have also felt that I was in slow motion and at warp

speed. If what they say in science that matter is never destroyed, my hope for myself is that my matter is reconfiguring in a learning way each time I experience opportunities for change.

Mediating Behaviors and Strategies

A number of behaviors or strategies (See Table 2) were identified that were able either to support or to impede the development of the learning community, depending on their use by the group or individual. Used productively and sensitively in one group, a behavior such as conflict served as a way to open up a dialogue that led to new realizations for the writer. In another group, the same behavior served effectively to stop a line of inquiry that closed learning for the case writer and disengaged members of the group from the process.

All of the behaviors existed along a continuum of use from very negative to very positive. Groups and individuals made decisions about their use, as they tried them out and practiced with them in the first few weeks of the on-line work. The lack of the face-2-face responses offered the greatest challenges to participants as they looked for new ways to judge the effectiveness of behaviors in their virtual learning environment.

Table 2. Mediating Factors in the Development of a Virtual Learning Community

Mediating Behaviors/Strategies	**Technology & Medium**
• Conflict	• Technical problems
• Safety	• Access
• Empowerment	• Experience
• Emotions	• Technical support
• Humor	• Technical Facilitation
• Intimacy	
• Empathy/acknowledgement of feelings	
• Trust	
• Being explicit	
• Listening	
• Openness	
• Defensiveness	
• Expressing / recognizing fears	
• Excitement / fun / enjoyment	
• Authenticity	

The Technology

While the research questions did not directly address the technology, the fact that this study was focused on findings about the elements of a virtual learning community, the use and effect of the technology were embedded throughout the work of the groups and the study. The effect of technology (See Table 2) was seen in two primary ways: first, the problems that arose from the software or network itself that presented technical glitches for the participants; and second the psychological issues it raised for participants about communicating in cyberspace without the benefit of eye contact and body.

Similar to the other mediating factors, the technology was seen either as a means to support the learning or to hinder it. The difference appeared to be the level of commitment to the other components of the learning and group processes. For some, technical problems were sometimes an irritation but the technology itself became transparent to the user over time. For others, the reported dislike of the technology became an excuse for low participation levels.

One participant summed up her reactions to the technology this way:

.... The on-line experience has become another reality for me. At first I felt awkward with the technology and responding. After the first few attempts the thoughts and writing became less stressful. Now I find I just say it. I feel our group has strong commitment. My feelings from the responses, inquiry and support is that we care about each other both in terms of learning but more importantly in terms of humanity. Having the initial f2f relationship has made it easier to for me to do the electronic. I visualize your faces and expressions; that's a comfort to me. I've trusted myself to trust you. I also feel very territorial and protective of our group.

Contributing Factors to a Virtual Learning Community

The virtual learning space does not exist in a void, but is just one part of the participants' world. Preconditions (See Table 3) were identified as those intangible things, or "baggage", that a participant brought to the experience of the virtual community. Environmental influences were those things that had to be attended to outside of the learning community and that at times impinged on the virtual community. Results were those things that participants took away from this experience and that also provided feedback into the community.

Table 3. Contributing Factors in the Development of a Virtual Learning Community

Preconditions	**Environmental Influences**	**Results**
• Personal traits	• Work	• AHA's!
• F2F experience with group	• School	• Use in practice
• power roles outside of group	• Home	• Practice of learning
• Confidence in ability to contribute (self-esteem)	• Family	• Plans for future learning
		• Recognition of learning
• Motivation to participate		• Self-observable changes in behavior

Implications

Training has become much more than just designing and delivering courses. It is also about facilitating participation in and supporting learning communities. ". . . there is a big difference between organizing classroom training that is supposed to be the totality of the learning event, and seeing it as part of the practice of learning communities who are in charge of their own learning" (Wenger, 1997, p. 25). Using collaborative web-based technology, HRD professionals have the opportunity to redesign learning experiences and extend their support to virtual learning communities that include diverse and distributed participants, fostering the ability of individuals, groups, and organizations to learn and "reconstruct existing perspectives" in new ways (Nonaka &Takeuchi, 1995, p. 46).

An effort to understand how groups form a learning community and the processes by which learning occurs within groups across space and time builds on the research that focuses on participation and learning in a collaborative environment. The findings of this study have begun to define the "what" of virtual learning communities, indicating the integrative nature of the learning and group dynamics that takes place within them. It has also begun to elaborate the skills participants may find useful for collaborating through technology with distant and diverse people. This has implications for practitioners and learners in organizations that are using technology to communicate and build knowledge through collaborative efforts.

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Conducting Multilingual Qualitative Research in Human Resource Development: Implications for Validity and Reliability

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This paper addresses the question: "How can you ensure the validity and reliability of a qualitative study conducted in more than one language?" The decisions confronted by the author in a study conducted in three languages and the implications for validity and reliability in cross-cultural research are discussed.

Keywords: Multilingual Qualitative Research; Validity and Reliability

The recent challenges faced by the author of this paper while working on a research study conducted in three languages made her aware of the lack of guidance not only in the human resource development literature, but also in the cross-cultural research literature regarding multilingual qualitative research. The researcher's awareness of the implications of collecting data in different languages which has to be translated in English for analysis and report on the validity and reliability of a study led to this paper. This paper addresses the question of how to ensure the validity and reliability of a qualitative study conducted in more than one language.

The Study

The purpose of the study which led to this paper was to find out how owner-managers of small private companies in Romania learn what they need to know to run their businesses successfully in the transition to a free market economy forced by the collapse of the centrally planned economy and of the dictatorial, communist regime. In order to achieve this purpose, a qualitative methodology using the critical incident technique was selected and in-depth, face-to-face interviews with owner-managers of successful (on the top list of companies compiled by the Chamber of Commerce at county and country level) small (2-99 employees) Romanian companies were conducted. The managers were selected to represent both genders and the nationalities (Hungarian and Romanian) specific to the two regions of the country represented in the study. The researcher was aware that the best way in which these managers would describe their experiences would be in their mother tongue and she decided to pursue this approach. Another consideration in making this decision was that it would have become a gargantuan task to find a sample of owner-managers fitting the sample selection criteria and fluent in English. As the researcher is a native Romanian of Hungarian nationality, speaking both languages at mother tongue level, she felt confident about her decision. As the study was conceptualized and had to be reported in English, the real challenges arose after the data was gathered and transcribed verbatim by the researcher and the time came for its translation. The researcher is multilingual. In the last fifteen years, she used English extensively in her work by translating, interpreting, and tutoring from English to Romanian and Hungarian, and vice-versa. The translation of the transcribed material, in order to ensure the rigor of the study, proved to be a study by itself. In the following sections, the steps taken by the researcher to ensure the validity and reliability of her translation will be described.

Preparation for the Study and Data Gathering

As a preparation for this study, the researcher conducted a pilot telephone interview in Romanian. She transcribed verbatim the recorded interview and then translated it into English. A back translation was performed for parts of the data by a Romanian citizen residing in the United States who had previous experience in translating. The back translated parts were very similar with the original. Some of the differences were in the choice of words with similar meanings and slight differences in syntax. This process reassured the researcher that the meaning of the data was kept intact after the translation.

All face-to-face interviews were tape recorded and fieldnotes and memos were written by the researcher in English immediately after the interviews. Fieldnotes are defined by Bogdan and Biklen (1992) as "the written

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account of what the researcher hears, sees, experiences, and thinks in the course of collecting and reflecting on the data in a qualitative study" (p. 107). According to the authors, fieldnotes consist of a descriptive and a reflective part. The descriptive part represents the researcher's best effort to objectively record the details of what occurred in the field (e.g. description of the setting, depiction of activities, portraits of the participants). The reflective part represents the subjective side of the researcher (e.g. reflections on ethical dilemmas and conflicts, on the researcher's own feelings, reactions to the experience). Patton (1990) advises researchers not to trust anything to future recall and thus to take fieldnotes in the setting or as soon as possible after the event occurred. In order to be able to concentrate on the interview process, the researcher took fieldnotes immediately after each interview. During the data gathering, analysis and interpretation phases of the study, the researcher also wrote memos about the issues pertinent to each of these phases. Thus, taking fieldnotes and memos during a qualitative study where the researcher is considered the instrument is very important. It is a way to acknowledge and control the researcher's effect. In this instance, it is an important way to document the context of the interview to later guide translation efforts.

Translation of the Data

Linguists were preoccupied since centuries with the notion of accuracy in translations. The translation literature is abundant in approaches and debates about different approaches to translation ranging from transformation of a text including creation and manipulation to a faithful adherence to the original text. As Berman (1992) described:

> The domain of translation has always been the site of a curious contradiction. On the one hand, translation is considered to be purely intuitive practice - in part technical, in part literary - which, at bottom does not require any specific theory or form of reflection. On the other hand, there has been - at least since Cicero, Horace, and Saint Jerome - an abundance of writings on translation of a religious, philosophical, literary, methodological or, more recently scientific nature. (p. 1)

As these debates proved useful in raising the researcher's awareness of the difficulties involved in making decisions about how to translate a text, they failed to offer the guidance necessary for conducting her multilingual qualitative study. The words of Wilhelm von Humboldt as cited by Berman (1992) resonated in her mind in the midst of her study. On July 23, 1796, Wilhelm von Humboldt wrote the following in his Letter to Schlegel:

> Any translator must inevitably encounter one of the following obstacles: he will cleave with too much accuracy either to the original, at the expense of his people's language and taste, or to the originality of his people, at the expense of the work to be translated. (ix)

The translation task in qualitative research is significantly time-consuming. As a result, the researcher translated nine interviews; three other translators translated the other six. One of the translators is a Romanian linguist who a few years ago moved to Canada and has over twenty years of experience in translating to and from English and Romanian. The other two translators are fluent in Romanian, Hungarian, and English, have lived in both Romania and the United States, and have experience in translating. Although it is impossible to achieve a word-for-word translation, both the researcher and the three translators made an attempt to keep the rendering as consistent as possible and still convey the meaning of the original message. The interviewed managers were very eloquent in describing their learning experiences, but this translation for meaning rather than word-for-word gave even more coherence of the translated sentences and phrases. In order to arrive to this decision, the researcher spent countless hours reading the translation literature and talking to translators.

During the translation process, the researcher was aware of the selfhood paradox described by Will (1993) in the following way: "In going out to a foreign text, to translate it into our language, we carry our personal tastes, language-style, perceptions with us, and what we bring back is essentially our own self-expression in words partially prompted by someone else's expression" (p. 47). Thus, she made an attempt to control some of these translation biases by having parts of her translations also translated by two of the above mentioned translators and then comparing the two translations. An side-by-side example of two translations is presented in Table 1. The shading and parenthetical notes in the table illustrate how some of the judgment calls were made in this process. As in the case of the pilot there were a few differences in the choice of words with similar meanings and a few differences in syntax.

Table 1.
Evidence of the Translation Process

Translation 1	**Translation 2**
R: And what is your opinion why is this happening? P: Well, this is the cancer of the Romanian society - instability - you don t know what tomorrow will bring, you have no idea. Eh, you don t know what will happen tomorrow, I will die, my business will be taken away, another government will come that will do things differently, it will not allow, etc. **["Eh" and the repetition of what will happen tomorrow were kept because of the emphasis put by the manager on this part of the sentence]** People are afraid. There is no such thing as security, stability as it is in developed countries where tomorrow will be like today or a little bit worse or a little bit better, but there is a stable environment. If I open a business I do it thinking that my son will have a chance to take over and hopefully his son will also be there, but here, here it is not possible. Tomorrow they will take it, a new owner will come, or an old one or somebody, they will take it; so why should I put work into it, why should I restore it, because of this instability, how should I enter into a one year contract? **[The manager used the first person "I", but it can be interpreted as an issue/question pertaining to owner-managers in general]** They are somewhat right as this is generated by the society s instability. R: And what is your opinion why are the state owned stores not entering into a contract? Let s say that the private ones, as you told me, lack tomorrow s security, but the state owned ones receive their salaries anyway. Did you try with the state owned ones? P: Of course, but the state owned stores show no interest, no interest to make profit, why should they make profit? If the salary of the employees is ensured and the good salary for the director and the chief accountant and there are stores which have four, five, six directors and I don t know how many chief accountants, if their salaries are made there is no incentive whatsoever to make more. For example, in many cases my only chance to succeed, you can imagine what an unbearable situation, was to bribe the director in order for him to take my products - products which brought him a huge sale last year ensuring the salaries of I don t know how many employees. But he told me Sir, I m sorry but I cannot take any now from this, ok, how much do you have holding his pocket **[waiting for the bribe]**. So, this is the situation, a disaster. I m telling you this is the Romanian society. I m not sure maybe if the competition would have been stronger, but anyway in a western country we	R: What is your opinion? Why don t they enter into a contract? **[The translator clarifies the context of the comment - the contract]** P: This is the Romanian society s cancer - instability - you have no idea what will happen tomorrow. I can die, and my business will be taken away, another government will be in power and have different regulations, and will not allow, etc. People are afraid. We don t have the stability that the developed countries have, that what we have today we will have it also tomorrow, that today this is for sure and tomorrow it will be the same or a little bit worse or a little bit better, but at least it is stability. If I open a business, I open it thinking that my son will continue to do it, and after that his son will continue it, but this is not possible. Tomorrow it can be confiscated, a new owner will come, or an old one, who knows? Why to invest in it, to renovate the business, because of this instability, why should I enter into a one year contract? They are right when they say that this is generated by the society s instability. R: What is your opinion, why the state owned companies will not enter into a contract? I understand that the private companies have no stability for tomorrow, but the state owned ones, as you said, get payed anyway. Did you try with the state owned companies? P: I sure did try **[more colloquial, but we decide on "of course" as it conveyed the same meaning]**, but they will not show interest, they are not interested in profit making, why would they be? They make the salaries for their employees, the big salaries for the director, the chief accountant, and there are stores with four, five, or six directors, so they make those salaries, and above that they are not interested. For example, in many places I succeeded by bribing the director to make him buy our merchandise, what an embarrassing situation for me, merchandise which last year he sold with a big profit and he made the salaries for I don t know how many people. He told me Sir, I m sorry but I cannot buy anything from you right now, so how much do you have , and he was showing his pocket. So, this is the situation, a catastrophic one. This is the Romanian society. I don t know, maybe if the competition would have been stronger, or in a western society I would not be in this situation. After so much work I put into this business I shouldn t be in this situation. Maybe there the competition would have destroyed me, but still I should not be in this situation.

won_t be in this situation. Thus, after so much work I should not be in this situation, I should not be here. Maybe there the competition would have destroyed me, but even then I think I should not be in this stage. R: So, if you think back of all this, what do you feel? P: Helplessness, anger. You feel that your head is blowing up, but you cannot do anything. You explain, at the end you beg Please, Sir, my products are so good that even in the west you cannot find better ones_ - you can, but if you import them you have to pay three times as much than for mine and mine are as good as those. [**The underlined part was an explanation to the researcher not to the state-owned store managers which was not clear from the context, but the researcher could even recall the intonations of the manager's voice**] but for whatever reason he doesn t want them. R: In summary, what did you learn from this situation? P: Well, from this situation, compromising.	R: When you think back to this situation, what do you feel? P: Helplessness, anger. I feel that my brain is blowing up, but there is nothing I can do about it. [**Although the underlined expression was almost translated word-for-word, "your head is blowing up" was decided upon as it was felt that it is closer to what would be used in the United States and although it was used in a more general way with "you" not "I"**] You explain and even beg that Sir my merchandise is good, even better than what the westerners make - and you explain that if you import the same merchandise from a western country it will cost three times more then if you buy it from me, but for whatever reason he doesn t want it. R: What did you learn from this situation? P: From this situation I learned to compromise. [

The translation of idioms prompted some interesting discussions as there were times when it was difficult to find a matching English idiom for the Hungarian or Romanian one and the selection of words to convey the same meaning was discussed. For example, the Hungarian idiom "helyre pofozni" (where "helyre" means "back to his/her/it place and "pofozni" means "slap in the face") was difficult to translate as its meaning could be making something right after you made a mistake, bringing something/somebody back to shape, fixing something, bringing something up to date or a combination of some of these. In the context of the translation, the decision was made on "fixing something." The researcher started a dictionary of Hungarian - English (e.g. ravasz mint a roka = as sly as a fox), Romanian - English (e.g. e∏ti la cheremul lor = you are at their mercy) idioms. There were some grammatical issues in the translations which also needed to be discussed. For example, in Hungarian language, the personal pronoun for the third person singular or plural cannot be distinguished by gender, thus the gender of the person could be deducted only from the context which did not always contain this information. In such cases the decision was made to translate it as he/she. Although there were only minor differences in the translations, the researcher discussed all of them with the translators and changes were agreed upon when necessary. The six translations which were not translated by the researcher were all side-by-side double checked by the researcher with their originals in Hungarian or Romanian. The researcher marked with a red pen the few places where she thought the meaning of the translation was not clear and discussed these notes with the translators. A few minor changes were made as a result of this process. For example one of the translators wrote: "And at a certain moment I found myself with the possibilities behind the necessities." Although this translation was the closest to what was said one collective word which could have clarified this sentence was not translated. Thus, we decided on: "And at a certain moment I found myself with a shortage of equipment and workforce, thus with my possibilities behind the demands."

Validity and Reliability

In the scientific paradigm, validity and reliability are considered the yardsticks of any believable and trustworthy research. Merriam & Simpson (1995) contend that "issues of validity and reliability are important considerations in any kind of research. But how one views validity and reliability in qualitative research differs somewhat from positivist research" (p. 101). Addressing these issues, Guba and Lincoln (1991) describe how

> within the scientific paradigm, truth value, typically called internal validity, depends on the degree of isomorphism between the study data and the phenomena to which they relate. There is one

> reality, and information is internally valid if it describes that reality and facilitates its control and manipulation. The naturalistic inquirer, however deals with multiple realities; and in the area of behavioral studies, those realities exist in the minds of people. (pp. 104-05)

Merriam (1988) also points out that in the naturalistic inquiry "because reality is holistic, multi-dimensional, and ever changing, it is not a single, fixed objective phenomenon waiting to be discovered, observed, and measured" (p. 167). The author continues by stressing that assessing the isomorphism between the data collected and the reality from which they were derived is an inappropriate determinant of validity in this approach as what is being observed are people's constructions of reality and how they understand the world. Thus, according to the above authors, the validity of a study rests on the researcher's demonstration that he/she represented those multiple constructions adequately. Because of the researcher's role as an instrument of the research, and his/her proximity to its reality, internal validity is considered a strength of qualitative research (Merriam & Simpson, 1995). In order to ensure internal validity, the researcher represented the manager's construction of reality through the thick description of their accounts and by reflecting on her memos in an attempt to acknowledge and control her biases. This is particularly important when translating others' reality. It was felt in this study that it was more important to convey as nearly as possible what was meant rather than a verbatim rendering. When working in multiple languages, literal translation may be meaningless. For example the Hungarian part of a sentence "...a f ld munka ut<n, j n a m<sik ûs teszi a kalapot a fejûre", in a word-for-word translation would be "...after the dirt work the other is coming and puts his hat on his head " which in fact means that after the basement was dug out, the man decided to step out from the deal (took his hat and walked out).

Merriam (1988) and Merriam & Simpson (1995) suggest that rather than measuring reliability as it is defined by quantitative researchers, qualitative researchers should ask themselves whether the results of the study make sense, are dependable and consistent with the collected data. In order to ensure dependable results, the authors recommend several strategies such as: an account of the researcher's assumptions and the theory behind the study; a clear description of the research subjects and the environment in which the data collection took place as well as of the data analysis process; the use of triangulation by using multiple investigators, multiple sources of data, or multiple methods to confirm the findings of the study; member checking; and peer review. In talking about enhancing the quality and credibility of qualitative analysis, Patton (1990) also contends that "The qualitative researcher has an obligation to be methodical in reporting sufficient details of data collection and the processes of analysis to permit others to judge the quality of the resulting product." (p. 462)

Although member checking was not possible in this study due to the difficulties in reaching the managers participating in this study after the researcher returned to the United States, the researcher used the other suggested strategies to enhance the quality and credibility of this study as they are described in the following section. This is particularly important since she could also not check her translations with these managers since they did not speak fluent English. In her report of the study, the researcher described as clearly as possible the theoretical framework guiding the study, the sample selection, data collection procedures and the conditions under which these took place, the approach and methods of translation, and the process of data analysis. Triangulation was also used through multiple sources of data. The researcher collected several incidents from each manager, thus creating a more holistic picture of their life, struggles, and learning experiences in th ir quest for survival amidst the unprecedented changes in their environment.

Lincoln and Guba (1985) also emphasized the importance of maintaining an audit trail -- documentation about the entire research process describing procedures clearly enough so that others can understand them, reconstruct them and subject them to scrutiny. Lincoln and Guba used the metaphor of the fiscal auditor who examines both the process and the product of the inquiry, in order to arrive at certain trustworthiness judgments and provide certain attestations. For this examination the fiscal auditor needs fiscal records, thus an audit trail. Without such an audit trail he/she would not be able to determine the dependability or the confirmability of the bookkeeping. Thus, it is imperative that such records be maintained during the inquiry; otherwise there will be no possibility of an audit later. As Miles and Huberman (1994) contend, careful record keeping is a way of connecting with important audiences. According to the authors, the audience could be the self and in this case records keep track of what was done along the way and may suggest ways of improving next steps. The audience could also be the readers of the research report who need to know what was done and how, as a way of assessing the credibility of the findings. A subset of this audience could also be the other researchers who are interested in secondary analysis of the data, want to carry out meta-analysis or synthesis of several studies, or want to replicate the findings to strengthen or refute them.

The researcher developed a clear audit trail of the study. She began by filing all the raw data consisting of tapes, field notes, documents from the Romanian Chamber of Commerce and Statistics Department. Then the

transcribed materials were filed by manager together with the translated transcripts. There are two or three versions of the translated transcripts for each managers depending on who translated the materials. If the translation was done by the researcher, in some cases the translation contains notes regarding some changes as a result of its comparison with parts translated by another translator. If the translation was not done by the researcher, one of the versions has suggested changes by the researcher and the other one has the changes finally implemented after the discussion with the translator. Then for each manager there is a coded translated transcript. Each manager s file also contains a cameo including information about the manager, his/her company and a description of the critical incidents described by that manager. The researcher s handwritten memos (methodological, analytical, and theoretical) were filed separately in a special folder. The methodological memos also contain decisions taken in the translations, the dictionaries of idioms and of some words which posed challenges in translation. All citations bear the manager s code whose words are illustrated and the page number of the translated document from where the citation was extracted. Thus, all citations can be easily traced back to the translated interviews.

Conclusions and Implications

Although the researcher s study was not funded by a foundation or international institution and the managers participating in the study were not used to researchers roaming around, the researcher of this study was pleasantly surprised by the trust and interest showed by these managers in her work and study. The researcher noticed that it was important for these managers that she was a native of their country, spoke their mother tongue, grew up, was educated and worked in the same environment they did until 1990. The discussions preceding the interviews about different topics familiar to both the researcher and the managers were very helpful in establishing the trust level necessary for a meaningful interaction. Thus, the researcher believes that it is very important to collect data in the native language of the participants (especially if they don't master well the language in which the research will be reported). To build trust, it is also important for the participants in the study to see interest in their culture and the context in which they operate. Thus, collaborative work in cross-cultural research with colleagues familiar with the language and culture of the settings unknown to the human resource development researchers and practitioners is strongly recommended.

The use of several translators in translating the gathered data is considered by the researcher a very important decision in ensuring the validity and reliability of the translations. This process could be called "triangulation through multiple sources in translation." The researcher noticed that in some cases it was easier for her to translate the data as she had a better understanding of what was meant by the interviewees. As she conducted the interviews, she could recall the tonality of voice and non-verbal communication of the participant during the interview as well as the ambiance. Nevertheless, the discussions with the other translators brought to surface different points of view and issues needing clarifications and proved to be challenging and rewarding in the same time. Back translation was also used for sections of the data translated by the researcher in her pilot study. Although this was a reassuring way to test the judgment calls of the translator, it did not bring to surface the wealth of understanding of multiple translators (triangulation) and the decision making process involved. It was a growing experience to work with other people on these translations.

As in the last decade globalization opened new venues for cross-cultural research and practice in the HRD field even in countries which were unreachable before, the author hopes that the issues addressed in this paper would help both researchers and practitioners working in different cultures and with different languages.

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An Ethnographic Study of Cross-Cultural Impacts on Tutoring in an Organization

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This ethnography portrays one organization's use of tutoring in the Japanese language of a midwestern white male by a Japanese female instructor. The behaviors displayed by both the Japanese tutor and the adult learner, whose nationality and native cultures differ, and how the adult learner was impacted by these differences was examined. Insight into this cross-cultural interaction shed light into the creation of a framework for understanding cross-cultural learning interchanges such as this one.

Keywords: Adult Learning, Culture, Instruction

Because of the increasing globalization of the marketplace, United States business organizations are interfacing on a daily basis with companies and people from other countries. Employees within these corporations are being asked to work in and adapt to settings that may place them directly within cultures vastly different from their native cultures. Adler, Doktor, and Redding (1986) concluded that "organizations are becoming more similar in terms of structure and technology, whereas people's behavior within those organizations continues to manifest [national] culturally based dissimilarities" (p.302). In light of this globalization and the tendency of individuals to manifest cultural behavioral differences, this researcher was driven to understand the role of culture in organizational instructional situations that HRD professionals are asked to assess and specifically, how culture and cultural differences impact learning and instructional effectiveness.

Background Research and Theory

Learning in business environments is complex because the cultural frames that affect business are multidimensional; employees' beliefs are shaped not only by societal values, but also by organizational affiliation and occupational alliances (Hansen & Brooks, 1994). Instruction in these environments is also increasingly and comparably complex. Bilingual tutors face a variety of challenges. What is seldom recognized, at least in published literature on the subject, is that the task that confronts the bilingual tutor goes beyond the basic, explicit aim of providing instruction in the native language for specific subject areas as a means to gain proficiency in the second language. Indeed, at the very minimum, the bilingual tutor is a negotiator between cultures (Montero-Sieburth & Perez, 1987). This study thus finds its framework in two major areas of research and theory: a) culture and b) adult learning.

Negotiating Culture

"Culture" is defined by Kluckhohn (1951, p. 86, 5) as patterned ways of thinking, feeling, and reacting which are acquired and transmitted mainly by symbols, and which constitute the distinctive achievements of human groups, including their embodiments in artifacts. All cultures create belief systems that define appropriate and inappropriate social behavior. Meaning making is clearly reflected in the often unconscious rules that guide decision making, values, perceptions, communication styles, and so on.

Hofstede (1980) defined culture as "collective programming of the mind" that is rooted in value systems of major population groups and stable over long periods of history. Like Kluckhohn, Hofstede found that these mental programs serve to guide decision making, perceptions and communication styles, as well as learning preferences. Hofstede found by theoretical reasoning and statistical analysis that four main dimensions may be used to describe cultural differences. While one is not able to make inferences about individual members of cultures from Hofstede's national summary scores, the findings are used here to describe United States and Japanese culture in general.

Measured on a national culture scale, Japan showed a higher desire for interpersonal power or influence between two people (for example, a boss and subordinate) than did the United States, although the United States fell in the middle of the scale. Implications for education are noted by Hofstede, "...students are more dependent on teachers. There is more rote learning, and the asking of questions by students is seldom encouraged; teachers are more often supposed to be omniscient, even if they do not like it" (p. 99). Hofstede found the amount of anxiety that

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occurs with ambiguity for the Japanese was very high and double that of the United States. This would indicate a "preference for clear requirements and instructions" versus a low ranking which would indicate a "preference for broad guidelines" (p. 132).

In a highly individualistic society, leadership is the ideal aspired to versus membership and the collectivity as the ideal. The United Stated ranked very highly on this dimension, with Japan in the middle of the range, at half of the United States ranking. "Americans," said Stewart (1972), "have a tendency to see themselves in terms of sex and social roles which allows for freedom of choice in actions. The Japanese point of reference is the network of obligations among members of a group—the social nexus. Congeniality in social interaction is a predominant value among the Japanese" (p. 69). Japan also rated very highly on a dimension demonstrating a cultural affiliation for assertiveness versus nurturing (p. 176) while the United States rated above average on this indicator.

Linking Learning Style Preferences with Instruction

Knowles' (1980) Adult Learning Theory states that consideration of prior learner experience and knowledge is critical in planning adult learning methods. Knowles also found adult learning styles to be varied, situation dependent and best utilized by the learner being in charge of his/her own learning (including setting objectives, planning content, and measuring success).

Because culture plays a key role in determining how meaning is made from various inputs and the social behaviors appropriate in learning settings, it should be considered as a major input into instructional system design and delivery within organizations. Linking instruction with culturally-derived preferences was supported by a study performed by Hayes and Allison (1988). The study used Hofstede's approach to measuring cultural differences (1984) and Honey and Mumford's learning styles questionnaire (1983) to identify and confirm links between learning style and national culture in 195 midlevel managers from East Africa, India, and the United Kingdom. This is the only study that explores cross-cultural learning style differences in corporate environments that I have located although Adler, Doktor, and Redding (1986) and Doktor (1982) did find major differences in the cognitive processes of people from different cultures. Rogers (1973) found that information that is communicated in a style very different from what is culturally common often leads to a misunderstanding or lack of comprehension.

Methodology, Methods, Data Analysis, Assumptions and Limitations

This paper is the outcome of ethnographic research carried out in studying a Japanese tutor, Ms. Kawasaki, and a midwestern corporate employee, Mr. John Smith. Mr. Smith had been receiving Ms. Kawasaki's Japanese tutelage for a total of five months at the time of this research.

Methodology

Ethnographic research methodology was chosen for this study because it has a cultural focus. Spindler and Spindler (1987) said that the "phenomenon we study as ethnographers is the dialogue of action and interaction" (p. 2). Agar (1986) labeled ethnography a process of "mediating frames of meaning" (p. 18) between the ethnographer, who brings to his or her work the tradition in which he or she participates; including the training received in professional socialization, the group among whom the ethnographer is working, and the nature of the audience for whom the ethnographer is trying to produce a report. Ethnography is appropriate for studying cross-cultural learning and interchange because it prompts the researcher to study these in the context of the larger cultural setting.

Methods

A total of twelve microcultural participant observations of the tutoring sessions held at Mr. Smith's company offices were performed. On these occasions, both the session opening and greetings between Mr. Smith and Ms. Kawasaki as well as the session closing and good-byes were observed in order to gain insight into the informal relationship between Mr. Smith and Ms. Kawasaki. The remainder of the observations were time samples (5 minutes out of every 15 minute period) during the lessons in order to reduce bias (Lundy-Dobbert, 1982). The time between the observations was used to annotate the previous observations. Mr. Smith was also observed in his home; in preparing for his lessons in order to gain insight into his behavior and his motivation for them, and during a phone call to Ms. Kawasaki to cancel a lesson. At the conclusion of the participant observations, a one hour ethnographic interview with Mr. Smith was conducted. This format was useful because it enabled Mr. Smith to feel comfortable with the researcher, and the researcher with the subject matter. The interview was written verbatim as well as tape recorded with Mr. Smith's consent.

Role analysis was chosen as a structural method for this research in order to identify behaviors associated with cultural roles for instructors and learners. To achieve this, two additional tutoring sessions were observed.

Behaviors that consistently occurred and might be conceived of as patterns relating to role definition were documented.

On the day of the second structural role analysis observation, the researcher arrived to find Ms. Kawasaki in the lobby of the FourStar office. Her earlier session had been canceled and this afforded the opportunity to obtain informal information about her work history with Mr. Smith's company, as well as some of her personal history. A similarly informal discussion occurred with Mr. Smith after all of the data were obtained. This time was used to fill gaps found in the data, such as how the company had arranged for the tutoring sessions, who had decided to engage a tutor for Mr. Smith, and so on. The research process lasted approximately one and one-half months.

Data Analysis

The data gathered by the above methods were analyzed separately as well as together. Following collection of all fifteen microcultural observations, a short summary of overall impressions was written (Miles & Huberman, 1994, p. 51). All of the data was then marked, coded and indexed. The analysis technique was completed by placing the data into matrices using Mr. Smith and Ms. Kawasaki on one axis and categories such as body language/posture, facial expression, tone, words spoken/dialogue, and materials on the other. Each of these categories was broken down into more specific items. The observations were then analyzed as three separate groups ("outside of tutoring sessions," "during tutoring sessions" and "approach to studies") and the data from them placed into three different matrices. Finally, an impression drawn from comparison and contrast of the data as a whole was written. Patterns across all of the observations were drawn and related to each other. Because the tutor-adult learner interaction was central to this study, research describing adult learning theory was drawn upon. The last step in the microcultural analysis was to identify gaps that remained in the study that became the impetus for the follow-up research that occurred later.

The first steps taken following the interview were to confirm the researcher's verbatim writings with the tape recording of the interview and to fill in gaps that had occurred. The interview information was then transcribed and analyzed for informant logic by linking key words in the questions to those in Mr. Smith's comments. The data were then identified for sentence structure and word types and laid out by drawing sentences into trees. This enabled the identification of key words, themes and data "chunks." The use of positive and negative weights across the themes, the informant's use of modifiers, and when the use of modifiers occurred, i.e., in response to which questions, were then compared and contrasted. Finally, the interview was analyzed as a whole in the context of Mr. Smith's occupational and organizational alliances and briefly related to theory relevant to the interview's outcomes.

Following collection of the structural observations, a short summary of overall impressions was written by the researcher (Miles & Huberman, 1994, p. 51). Like the microcultural data analysis, the fieldnotes of the study were marked, coded and indexed, and the data were placed into matrices. Again, the latter categories were broken down more specifically. The data were then analyzed separately for Mr. Smith and Ms. Kawasaki in order to determine their individual roles in the tutoring relationship and the behaviors that formed patterns across both observations; role content, behaviors, process, and affect. Next, the data were analyzed for assigned/assumed functions and responsibilities and these findings related to theory and research. Finally, inferences were made about Mr. Smith and Ms. Kawasaki's feelings about their duties and values in a larger social structure as evidenced by roles they played in the context of the tutoring sessions.

All of the data analysis methods contributed to the creation of a conceptual framework of the study explained in the conclusions area of this report. I believe that triangulation through use of the three methods (microcultural participant observation, ethnographic interview, and structural role analysis), as well as intersubjective agreement helped to ensure the validity of the data and its presentation in this report. Informal follow-up data primarily taking the form of facts relating to the history and context of the tutoring arrangement were not analyzed except as they provided information not obtained in the methods above.

Assumptions and Limitations of the Study

Ethnographic methodology uses the researcher as the research instrument. As such, I assumed that I was capable, as a research instrument, to enter the field and take on a role that allowed the data to emerge. My further assumption as a researcher was that this topic of study was worthwhile and that the informants provided information that is of interest to the reader and the researcher. It was also assumed that the informant, Mr. Smith, would be willing to talk about his experiences, would be comfortable talking with the researcher, and that his voicing would be a valid representation of his experiences. Finally, it was assumed that Mr. Smith had been cognizant of differences between his native culture and that of Japanese culture.

By using ethnographic research methodology, I as a researcher assumed that there were distinct patterns that could be observed and studied in individuals belonging to different native cultural groups. This use also assumed that the patterns that emerged might be characteristic of the larger culture, although one is not able to generalize to whole cultures simply by investigating the interactions between two people.

Presentation of the Data

The cross-cultural learning environment was studied through: (a) physical patterns: layout of the setting and objects used; the human setting, the tutor and the adult learner, their relationship to the physical setting, and the scheduling involved, (b) the environment's formal structure: history of the tutelage and evaluation of tutors by Mr. Smith's company, (c) the tutoring/learning environment: a typical session, Ms. Kawasaki's typical behavior patterns and teaching methods, and Mr. Smith's typical behavior patterns, and (d) the cognitive patterns that emerged: definition of good instruction, Mr. Smith's expectations of the tutoring, how these were communicated to Ms. Kawasaki, and if they were met; perceptions of culture gained, and the relationship between Mr. Smith and Ms. Kawasaki. Each of these areas will be explored below.

Physical Patterns

In order to fully understand the cross-cultural learning experience being studied, it was necessary to learn of the historical background of Mr. Smith and Ms. Kawasaki. It was also important to put the learning experience into the context of the environment in which it was conducted, namely Mr. Smith's company, FourStar*. FourStar is a large midwestern United States-based multinational corporation, an "organization active in several countries but in which there is one dominant 'home' national culture to which most key decision makers of the organization belong" (Hofstede, 1980, p. 271). FourStar is based in the city in which Mr. Smith's office is located, although his office is not in the company's headquarters. The tutoring sessions were held in FourStar's company offices, and this is where the participant observations were performed. The tutoring session room itself was small and rather stark, the walls bare of decoration, and the only furniture a table with three chairs around it, a desk with chair, and a telephone on top of the desk. The building paging system could be heard clearly from inside the room; this and the telephone ringing were the only interruptions to the tutoring sessions. Materials used in the tutoring sessions included a pair of Japanese language textbooks and Mr. Smith's additional use of a Japanese dictionary, notepad and pen.

Mr. Smith's tutoring sessions were generally held on Tuesday and Thursday mornings from 9 a.m. until 10 a.m. If Mr. Smith or Ms. Kawasaki had a conflict with a particular date, a mutually agreed upon substitute date was arranged or the session canceled. Mr. Smith is a polymer physicist and mechanical engineer who works in the corporation's molding technology center, a research and development area that serves all of the corporation's divisions. His work also involves conducting research in cutting edge technology in his discipline. These activities cause him to be a frequent traveler, both in the United States and abroad. Mr. Smith is in his forties and describes himself as "a very process-oriented problem solver."

Ms. Kawasaki was born and spent the majority of her life living in her native country of Japan. She is now in her late forties or early fifties and has lived for the last fifteen years in the United States. She and her husband both received green cards one year after arriving in the United States. Ms. Kawasaki has taught Japanese (as a tutor) for FourStar for five years. She also teaches Japanese at a midwestern United States Japanese school for students who must retain Japanese while in the United States. In addition to these pursuits, Ms. Kawasaki teaches Japanese tutors in "how to tutor."

The Formal Structure of the Environment

Information regarding the environment's formal structure was obtained by informal discussion with Mr. Smith as well as through analysis of interview data. Mr. Smith took "language classes" (his description of the tutoring sessions) for about four months in the last quarter of 1996 in preparation for a business trip to Japan which lasted from January through April 1997. In preparation for another trip to Japan in March 1998, he began to retake Japanese classes based on the same twice a week schedule, beginning about one month prior to the first observation. Expectations of Ms. Kawasaki are determined individually by Mr. Smith and another colleague of his who is also receiving tutoring lessons from her. They are the only ones who evaluate their individual tutelage and its outcomes. "FourStar and myself," said Mr. Smith, "are focused on reducing non-value activities." Implicit in this statement is Mr. Smith's evaluation of his tutelage as a valuable activity.

Tutoring/Learning Environment

The typical tutoring session began with brief greetings of "Ohiyo gozaimas" (Good morning) between Mr. Smith and Ms. Kawasaki. The session then typically flowed without interruption with the subject matter the focus of attention until the hour was over and brief good-byes shared. Then the participants would file out into the hallway, Mr. Smith leading, followed by Ms. Kawasaki. Mr. Smith would continue on down the hallway, presumably to his office, and Ms. Kawasaki would sign herself out at the security desk and leave the building.

Mr. Smith used the formal suffix of "san" to introduce Ms. Kawasaki ("Kawasaki-san"), called her by this name on the phone, and referred to her in the tutoring sessions in the same way. She did not call him by any name at all. Use of the formal "san" and not "sansie," the Japanese formality for "teacher," implied some level of formality in the sessions, but not as much as could be used. The use of "san" by Mr. Smith contrasted somewhat with the casualness of the typical session. This casualness was demonstrated by both Mr. Smith and Ms. Kawasaki being dressed more casually than business formal, and the sessions lacking the appearance of a formal structure. In contrast to the casualness of the session structure was Ms. Kawasaki's assumed behavioral role, shown through her posture and body language. She remained in an erect, correct posture prior to, during, and after the close of the sessions. This body posture, though open, had few fluctuations. Fluctuations that did occur were either those based on lesson activity (paging through the textbook or standing to assist Mr. Smith to locate a term in his dictionary, for example) or in response to Mr. Smith's encroachment on her personal space (generally kept to about two feet). These movements were all characteristically close to her body and relatively small. Direct eye contact between Mr. Smith and Ms. Kawasaki was a rarity, and when it did occur, it was very brief in duration. Mr. Smith assumed a dominant (classical male) role in process behaviors associated with Ms. Kawasaki; he led when they walked down the hall, he chose the session topics most of the time, and he signed the log book that documented their lessons. Ms. Kawasaki assumed a positive affective role by showing only positive emotion, affirming the correct use of Japanese by Mr. Smith, and seldom using negative comments. She also assumed a non-dominant role in process behaviors, such as following rather than leading, coaching versus directing, asking for consensus, and maintaining the documentation log book.

Ms. Kawasaki's dominant teaching methods appeared to be coaching and role modeling. Throughout the sessions, Mr. Smith would either read out loud from his textbook, construct sentences in Japanese using the textbook as a guide, ask Ms. Kawasaki for assistance with correspondence to and from Japanese business associates, or carry on a free-flow conversation with Ms. Kawasaki in Japanese. Many times, the sessions incorporated more than one of these elements. There was a consistent pattern throughout the sessions: Mr. Smith speaking a phrase or sentence and Ms. Kawasaki repeating the corrected phraseology or sentence, emphasizing the corrected area by stressing the syllable or diction. Coaching also took the form of answering the many questions of Mr. Smith and giving positive, supportive feedback such as "Hai!" (yes!), nodding, or smiling. More elaborate compliments on Mr. Smith's progress were less frequent in occurrence. Ms. Kawasaki seldom used negatively loaded comments, and only displayed positive emotions. Very rarely did Ms. Kawasaki herself use questioning as a teaching method or take a directive approach, however, she did occasionally encourage Mr. Smith to study his Japanese!

Mr. Smith assumed a role in the tutoring sessions of an active learner. His conversation during the tutoring sessions focused either on discussion of the subject matter or in questioning Ms. Kawasaki about the subject matter. He also took the initiative to seek out other references for assistance, i.e., his Japanese dictionary. On occasion, Mr. Smith ruminated negatively about his performance, although laughter came easily to him in the sessions as well. Throughout the sessions, he displayed a broad range of emotion: frowning, smiling, laughing, sighing, groaning, shaking his head. While reading out loud, he stressed syllables in a fashion similar to that of Ms. Kawasaki. He wrote notes to himself and had his Japanese dictionary nearby, which he used occasionally. During Mr. Smith's interview, he had this to say about his learning style and constraints:

> Study lessons are most optimized when carried out to combine both verbal usage as well as some form of visual stimuli—writing things down or highlighting, or taking time to verbalize what is read...makes lessons to be retained in memory although the pronunciation may not necessarily be correct...I should study more. My biggest complaint is the lack of adequate textbooks. The language is complicated and it is difficult to find good, reasonably inclusive texts.

Perhaps the most interesting difference between Ms. Kawasaki's behavior and Mr. Smith's was in their respective use of personal space. Mr. Smith tended to use space at will, opening his arms wide, waving ("talking with") his hands, moving from close to the table to learning away from it. These gestures, along with fidgeting such as wiggling his feet, seemed very comfortable to him. Most often he assumed an open body position, but on

occasion he used a closed one, drawing himself near to his text and placing one arm with his head resting on it between himself and Ms. Kawasaki. This seemed to occur when he was engaged in deep thought, and was typically combined with a frowning countenance and non-direct eye contact.

Cognitive Processes

During the interview with Mr. Smith, he commented that, "Ms. Kawasaki is a very good teacher. She is very encouraging." When pressed by the question, "What makes her a good teacher?" Mr. Smith stated,

> She is very familiar with her language and is still learning English. So to be able to teach a language one must know grammatical structure—she's able to explain her language in a grammatical sense because that's how she's learned English. Since she is learning English skills using an English format she is able to describe Japanese in the same format; subject, predicate, adjective...

In response to the prompt, "You state that she is also 'very encouraging.' What specifically does she do that encourages you?" Mr. Smith replied,

> What I mean is she frequently interjects, 2-3 times per lesson, an encouraging statement when I happen to do something right or when my statements are well prepared.

When probed, "What kinds of things does she interject, can you give me examples?" He responded,"She says 'josu desnay,' which means, 'Good job, you rookie!' <pause> No, which means 'good job.' I couldn't be happier with the quality of tutor I have."

Mr. Smith's answers defined "goodness" in instruction as the capability to have command not only of the subject matter, but also to be able to communicate the subject matter effectively while positively reinforcing the learner.

Mr. Smith had high expectations of his tutelage. While he noted that foreign language studies are pursued by people for reasons that "vary from an essential use of one's attributes to purely entertainment," he also stated that studying Japanese would allow him to "conduct rudimentary conversations in Japanese" during his travels to Japan. When asked if his tutelage had met his expectations prior to his 1997 trip to Japan. "Absolutely, it was helpful," he stated. He went on to say:

> It was necessary for me to navigate daily living routines singularly. The environment where I lived really required me to <pause> (sigh) to know at least fundamental aspects of the language—and this was only talking—I never did learn how to use my washing machine! I lived in an apartment building with no English speaking people. Most of the restaurant people spoke very little English. Same with most other modes of accomplishing daily tasks such as getting on the train, buying groceries...I was able to communicate on a minimalistic level even when I traversed the island.

In most of his other responses to interview questions, Mr. Smith responded with sentence structures strewn with lengthy chains of prepositional phrases and heavy use of modifiers. Mr. Smith's responses to questions regarding his evaluation of the tutelage were unique in that they did not involve this same use of modifiers. The above quote of "Absolutely, it was helpful" is relatively clean and simple in contrast to Mr. Smith's other responses. His evaluative responses were also positively weighted. This may mean that Mr. Smith was more emphatically positive about these thoughts and verbalizations.

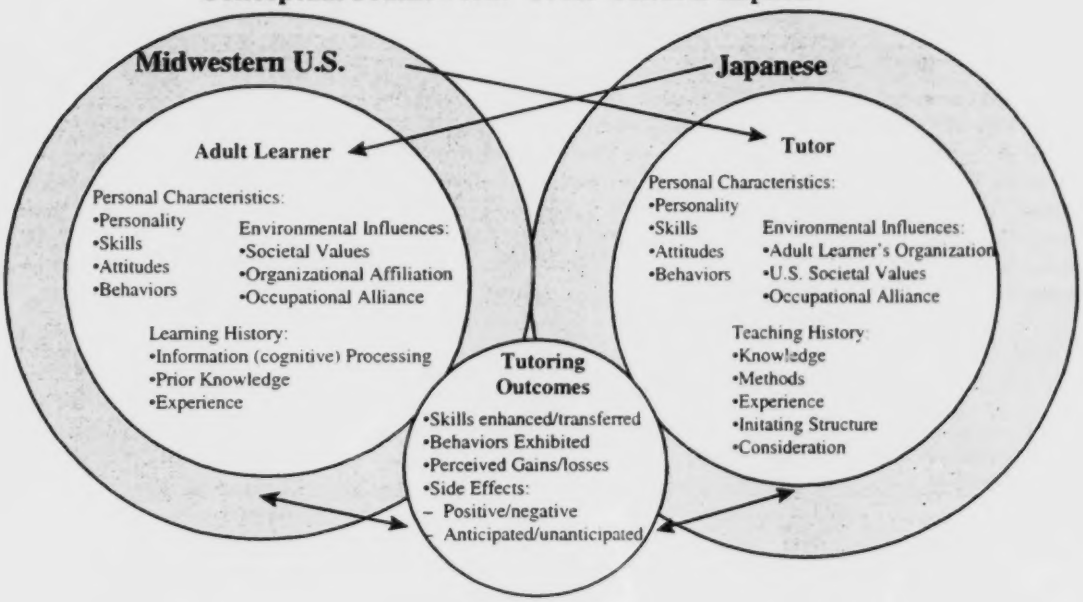
Did Mr. Smith gain any impressions about Japanese culture from his sessions with Ms. Kawasaki prior to his travel to Japan? Mr. Smith's answer to this interview question was negatively weighted and concise when he responded that "I was just learning another language. I didn't think anything special." If the same logic is applied, the very concise nature of these comments and their negative weight would imply that Mr. Smith was emphatic in the belief that he was not aware of any gained insights about Japan after working with Ms. Kawasaki.

Conclusions and Conceptual Framework

Any time a learning environment is created, an opportunity exists for the individuals involved to have differing cultural backgrounds. In attempting to relate the information gathered from this study to the larger social context, the framework illustrated below was conceptualized. Expanding the framework to a greater than 1:1 ratio could be accomplished by adding a sphere for each person involved in the educational environment. For simplicity sake, the framework will be described using this research as an example. The framework takes as a starting point the native

cultural background of the parties involved, in this case, Ms. Kawasaki and Mr. Smith. Hofstede's cultural dimensions are an example of theory and research that may be used to describe the general native cultural background of the individuals or groups involved, as done in this report. The individual or group is then assessed as a part of that culture, and described broadly within its parameters, remembering that generalizing national culture to an individual is an ecological fallacy.

Conceptual Framework: Cross-Cultural Impacts



Next, the individual's role as learner(s) or instructor within his/her or their native culture is researched as well as how that role may be changed or need to be altered to fit the cultural environment of the learning setting. For my example, this would involve trying to understand Ms. Kawasaki's role, along with its requisite knowledge and skills, as it would be held in her native Japan. One would examine the particular instructional methods that Ms. Kawasaki might use, thereby forming an impression of how she might initiate structure into the tutoring sessions and how she might give consideration to her learners. Mr. Smith's role as learner would be examined using Knowles' adult learning theory as a guide, allowing for differences given the FourStar culture (organizational affiliation) and Mr. Smith's occupation. The content of the tutoring sessions lent itself well to a participative learning environment such as Knowles found beneficial to adult learning. In allowing Mr. Smith to raise questions and in using an unstructured format, Ms. Kawasaki allowed Mr. Smith to be in charge of his own learning.

Finally, the individual's background is studied to obtain information regarding past history, personal characteristics and environmental influences. An example of this occurs in Mr. Smith's case, where it was necessary to discover what knowledge he had of Japanese prior to the observations of his learning environment, any experience he had with the language, and how he cognitively processed information in order to assess his learning. It was also important to establish an understanding of his personality, his skills, his attitudes and his behaviors while in the learning setting, as well as the societal values, organizational affiliation, and occupational alliances that all contributed to shape who he was as a learner. Mr. Smith described himself as a "process oriented problem solver." His need for control over a "problem" and his affinity for process were displayed when conducting the interview with him. Mr. Smith was told that the interview would be very open and not characterized by a lot of structure. His response was that he had expected a *very structured* interview. Over the course of the interview, Mr. Smith seemed relaxed and used open body language but his comfort at the time was probably quite low, and the lack of structure of

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the interview intimidating. Therefore it was difficult to follow his natural logic as he did not talk freely without being questioned. In the tutoring sessions, Mr. Smith also showed a preference for structure by assuming the role of an active learner: he was able to impose his own structure onto the sessions and eliminate any possible uncertainty. How did Ms. Kawasaki respond to his problem solving, process-oriented learning style? She conducted tutoring sessions that were stable, but not highly programmed. The sessions were also at times jointly planned by Ms. Kawasaki and Mr. Smith, and this fits the collective decision making model suggested by Knowles. Adapting instructional structure and consideration to fit the learner's needs such as Ms. Kawasaki did in this case for Mr. Smith is crucial for learning success.

The arrows drawn from the largest spheres (Japanese culture and Midwestern U.S. culture) serve to illustrate the transfer of cultural knowledge and perception one gains about another culture from being involved in a cross-cultural learning environment. Although Mr. Smith stated that he had not formed any impressions about Japan from Ms. Kawasaki, there may have been subconscious perceptions or assumptions he drew from her; just she may have formed impressions or assumptions of midwestern United States culture from her interactions with Mr. Smith.

The outcomes of the educational environment may be skill enhancement or transfer, exhibited behaviors, perceived gains or losses from the experience, and side effects, either positive/negative or anticipated/unanticipated. Mr. Smith stated in his interview that he enjoyed his tutoring sessions and was learning much from them, and that he felt he was in charge of his learning. Mr. Smith's continued work with the Japanese and his upcoming trip back to Japan caused him to have a vested interest in the outcome of his Japanese lessons. The final assessment of Mr. Smith's learning will occur when he is in Japan; he will be able to judge not only Ms. Kawasaki's effectiveness as a Japanese language tutor, but his success as an adult learner as well. For this reason, the outcome sphere on the model was drawn to overlap both Japanese and midwestern U.S. cultures.

This study sought to describe cross-cultural impacts on tutoring in an organizational setting. It was concluded by presenting a conceptual framework for the study and for future reference and use. The researcher's hope is that this study has preserved and dignified ethnographic methodology in the process.

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Trust and Distrust at Work: Normative and Dyad-exchange Influences on Performance

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This paper proposes a theoretical framework for exploring and understanding trust and distrust in organizations. The model is used to define trust and distrust as behavioral intentions, and to develop reliable and valid instruments for assessing trust and distrust in organizations. These surveys are employed in an empirical study, in which support was found for major portions of the model. Implications for practice, theory, and research, and limitations of the study are discussed.

Keywords: Knowledge Management; Theory Building; Intellectual Capital

Trust in organizations is receiving increasing attention from practitioners, among whom there is considerable agreement about the importance of trust as a foundation of effectiveness. Recent attempts to improve the theoretical development of trust have been outpaced by empirical work (Weidner, under review). This lack of definitional clarity has restricted the exploration of trust, its antecedents and consequences. In this paper, Fishbein and Ajzen's framework is employed to develop a behavioral intention definition of trust (and distrust). This definition and social exchange theory are used to develop a model of trust, which is used to develop reliable instruments for assessing trust and distrust in organizations. These surveys are then employed in an empirical study that follows.

Problem and Theoretical Framework

Past Definitions of Trust

A number of definitions of trust have been offered in the literature across disciplines. Trust has alternately been defined as belief, attitude, expectation, behavior, or as a combination of these elements; unfortunately, the variety of definitions of trust has fragmented its study. Complicating inconsistent definitions of trust across studies are inconsistencies between definition and operationalizations within studies; some authors others have not reported the tools which they have used hindering analysis and replication (Weidner, under review).

Fishbein and Ajzen's (1975) framework for the measurement and understanding of social behavior spans the range of beliefs, attitudes, intentions, behaviors, and outcomes. Using this well-established framework, behaviors can be predicted from behavioral intentions, provided that the intention is specific enough to correspond to the behavior or category of behaviors of interest and that the intention does not change between the time it is measured and the time the behavior occurs. Behavioral intentions are measured as a person's location on a subjective probabilistic intention (i.e., range from 0 to 100) involving the actor and some specific action. Intentions can in turn be predicted by a combination of an individual's attitude toward his/her own performance of a specific behavior, subjective norms, and the perception that salient others desire or do not desire a specific behavior. Attitudes are a person's *bipolar* evaluative or affective response to a given stimuli. In turn, attitudes are formed from descriptive and inferential beliefs about a given exchange partner and some specified behavior. Beliefs are the extent to which an individual holds a certain characteristic, quality, or attribute to be true, and are scaled from 0 to 100.

Definition of Trust and Distrust

Bacharach (1989) made several suggestions for the introduction and development of constructs. Because organizational researchers place significant emphasis on the examination of relationships between independent and dependent variables, the construct definition requires significant, careful attention.

- Trust is a intention to increase your vulnerability to an exchange partner whose behavior is not under your control in a situation in which the penalty, loss or deprivation you would suffer if the exchange partner abuses or fails to protect your vulnerability is substantially greater than the benefit, reward, or satisfaction you would gain if the exchange partner protects your vulnerability.

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This definition is an adaptation of that provided by Zand (1981), in which trust is operationalized as a behavior explained by an undefined and unmeasured variable. The above definition proposes trust be defined as a *behavioral intention*, avoiding the problem of indirect measurement. The situational aspects of this definition can guide aid specifying the nature of exchange and the trustor's vulnerability. Based on this definition, the consequences of trust should be context-specific behaviors, for at least two reasons: (1) since trust has been defined as a behavioral intention, it operates at the level of cognition, and (2) an individual's trust in an exchange partner is often provided by the individual as an explanation for behavior. Defining trust as a behavior fails to draw a necessary distinction between intention and behavior. Further, this definition can help define distrust, which has suffered from a lack of definitional clarity in the literature–largely by association with trust (Baier, 1985; definition adapted from Zand):

- Distrust is an intention to decrease your vulnerability to an exchange partner whose behavior is not under your control in a situation in which the penalty, loss or deprivation you would suffer if the exchange partner abuses or fails to protect your vulnerability is substantially greater than the benefit, reward, or satisfaction you would gain if the exchange partner protects your vulnerability.

Distrust implies an individual believes another will act in ways antithetical to their own interests. As a result, we make conscious and subconscious calculations of outcome expectations of for behaviors that effect our vulnerability.

A Generalized Model of Trust and Distrust

Social exchange theory (Blau, 1964) has been applied to a wide variety of research areas, including organizational citizenship (Morrison, 1994) and psychological contracts (Rousseau, 1995). Social exchange is characterized by multiple non-economic exchanges of social consideration between actors, above and beyond formally agreed upon economic or other requirements. When social exchange ceases to exist, reducing organizational membership to a transactional exchange, disengagement, withdrawal or exit are likely to occur. Thus, the presence of trust may be important to preventing organizational exit; distrust may serve as a precursor to organizational exit.

Predicting Behavior from Behavioral Intentions

Katz and Kahn (1978) proposed that three levels of motivation patterns and individual performance are needed for effective organizational performance: (a) individuals join and remain in an organization, (b) organizational members reliably perform the duties expected of them, and (c) they engage in behaviors that go beyond specific role requirements. For an employee, these three levels represent escalating degrees of risk or dependence on the organization. Thus, patterns of continued organization membership higher levels of trust are hypothesized to be the result of higher trust in supervisor (Hypothesis 1.1a) and trust in organization (H1.1b). Similarly, higher levels of in-role performance and extra-role performance are hypothesized to be the result of higher trust in supervisor (H2.1a and H 3.1a, respectively) and trust in organization (H2.1b and H3.1b, respectively). Conversely, higher levels of employee turnover or absenteeism are hypothesized to be the result of higher levels of distrust (which is antithetical to risk) in supervisor (H1.2a) and distrust in organization (H1.2b). Fear prevents people from doing their best, and has been shown to have an adverse impact on productivity and quality (Ryan and Oestreich, 1991). Thus, lower levels of in-role performance and extra-role performance are likely to result from distrust in supervisor (H2.2a and H 3.2a, respectively) and in organization (H2.2b and H 3.2b, respectively).

Predicting Trust and Distrust as Behavioral Intentions from Beliefs

Blau's (1964) original terms for social exchange and transactional exchange were economic and social exchange, but the term "economic" tends to obfuscate the instrument of the exchange, so transactional exchange is used throughout this paper. Higher levels of trust (in supervisor and in organization) are more likely to exist when beliefs are strong that a relationship is characterized by social exchange than when beliefs are weak that the relationship is characterized by social exchange (in supervisor, H4.1a, H4.1b; in organization, H4.1c, H4.1d). Relationships characterized by transactional exchange involve a more conscious calculation of risk, and exhibit lower levels of trust (in supervisor, H4.2a, H4.2b; in organization, H4.2c, 4.2d) since such relationships are negotiated or, at the least, specified in advance. It is not reasonable to expect distrust to be lower in relationships characterized by social exchange relationships (H5.1a-b-c-d) and higher in those characterized by transactional exchange (H5.2a-b-c-d).

This paper reports on two studies. The first uses the above framework to develop reliable and valid surveys of trust and distrust as behavioral intention definitions. These surveys are then employed in an empirical study.

Study 1

Method[1]

A well-established and frequently recommended process (DeVellis, 1991) for scale development was employed. Over 1,000 potential items were generated by an open-ended survey tapping the experiences of 96 individuals in work settings. These items were subjected to a content validation by 18 faculty and 32 Ph.D. and masters' students in business administration and communication at a university in the midwestern U.S. Some items were reworded to improve clarity, and five items were added at the suggestion of the judges, who opined that the additional items were relevant to the domain of trust and distrust. A total of 23 behavioral intention items and 100 beliefs items for the supervisor survey and 23 behavioral intention items and 64 beliefs items for the organization survey survived the content validation procedure. The item pool was refined, and administered to development samples of 108 and 122 respondents, respectively, for the supervisor and organization survey. Based on factor analysis or cluster analysis of the individual items, reliable scales were developed. The resulting subscales was analyzed to evaluate the convergent validity and construct validity of the measures. Different subjects were used for each step of the development process.

Results

Development of the supervisor survey resulted in behavioral intention subscales representing: *make positive suggestions, speak one's conscience, admit one's own mistakes, criticize one's supervisor, conceal self,* and *avoid contact with supervisor.* An iterative process similar to that used to develop behavioral intentions subscales was employed to refine the beliefs subscales. However, due to the low subject-to-items ratio, initial cluster analysis results rather than initial factor loadings were used as a starting point the beliefs subscales; fifteen different subscales emerged that demonstrated adequate content validity and reliability. A factor analysis (varimax rotation) was conducted of both the beliefs and behavioral intentions scale scores. Four sets of behavioral intentions regarding increasing vulnerability or trust (*make positive suggestions, speak one's conscience, admit one's own mistakes, critical of supervisor*) and two sets of behavioral intentions regarding reducing vulnerability or distrust loaded on two separate factors (62.0% of variance), supporting the notion that trust and distrust in the supervisor are distinct sets of behavioral intentions. Factor analysis of the beliefs subscales provided a two factor solution (76.5% of variance). These factors match the proposed employee-manager relationship as social or transactional exchange. Subscales loading on the social exchange factor included: *setting effective standards, providing help and support, being credible, providing valuable feedback, valuing individuals' contributions, valuing people as individuals, considering employee interests, encouraging employee decision making, being effective,* and *being consistent.* Subscales loading on the transactional exchange factor included: *valuing having higher status than employees, being deceptive, putting pressure on employees, being non-benevolent,* and *relying on negative reinforcement.* This survey was designated the *Workplace Beliefs Survey–Supervisor* or *WBS–S.*[1]

For the organization survey, a factor analysis was conducted on each of beliefs and behavioral intentions scale scores. As expected, the three sets of behavioral intentions regarding increasing vulnerability or trust (*help others, speak one's conscience, suggest positive ideas*) and one set of behavioral intentions regarding reducing vulnerability or distrust (*exit/withdraw*) loaded on separate factors (79.0% of variance) supporting the notion that trust and distrust in the organization represent two distinct sets of behavioral intentions. The beliefs subscales from the organization survey were also factor analyzed; given the size of the development sample and the exploratory nature of the scale development effort, a two factor (varimax rotation) solution was specified (Schuler, Aldag, and Brief, 1977). The factors (73.3% of variance) are consistent with the proposed framework. Subscales loading on the social exchange factor included: *provides clear goals and expectations, acts in mutual interests of employees and organization*; subscales loading on the transactional exchange factor included: *is not credible, takes advantage of employees,* and *is unethical.* This survey was designated the *Workplace Beliefs Survey–Organization* or *WBS–O.*[1]

Study 2

Method[1]

Data for this study were collected in an academic medical center in the midwestern U.S. Data were obtained from three sources: a survey completed by 881 employees, a survey completed by 98 managers, and organizational

records. The surveys were conducted as part of a baseline measurement before a work redesign/patient-centered care initiative at the medical center. Employees were paid for their time spent completing surveys, except for those who were unable to leave their work unit for patient care reasons. A residual data collection effort was implemented for these latter 377 employees, which involved completing surveys at home and mailing them to the data processing center (44 surveys were received via this method). Participation in the survey was voluntary; A comparison of subjects' demographic statistics indicates the sample data is fairly representative of the larger employee population. These data were made available for secondary analysis in this study. Following tabulation of results, feedback (including action planning) was provided for all management teams and staff in each department.

Measures

Employees were asked to complete the *Organizational Culture Inventory* or *OCI* (Cooke and Lafferty, 1986), one of the most widely used instruments for the quantitative assessment of behavioral norms, as well as the *WBS–S* and *WBS–O*.[2] Continued organizational membership was measured at the individual level by a single item drawn from the *Job Diagnostic Survey* (Hackman and Oldham, 1975). Separately, managers were asked to complete a survey grid in which they answered questions regarding the performance of each of the employees reporting directly to them; this included measures of in-role (three-item scale developed for this study) and extra-role performance (Podsakoff et al., 1990). Completed grids were obtained from 98 of 122 managers to whom they were distributed (80.3% return); manager's ratings were received for 1,394 employees (77.0% of the employee population of approximately 1,800 individuals). All survey measures in demonstrated adequate reliability as determined by Cronbach's *alpha*. The mean *alpha* for the *OCI* scales was .83, with a range from .72 to .92 for the twelve individual *OCI* scales. The mean *alphas* for the *WBS–S* intentions and beliefs scales were .72 and .79, respectively, with a range from .60 to .83 and .58 to .90 for the individual *WBS–S* intentions and beliefs scales, respectively (only one intention and beliefs scale had an *alpha* < .70). The mean *alphas* for the *WBS–O* intentions and beliefs scales were .73 and .80, respectively, with ranges from and .65 to .84 and 70 to .98 for the individual *WBS–O* intentions and beliefs scales, respectively. The factor structure of the *WBS–S* and *WBS–O* was consistent with Study 1.

To test the above hypotheses at the specified level of analysis, the data were transformed into two datasets. The individual level dataset (n = 881) consisted of the individual employee respondent records (descriptive statistics and correlations are reported in Table 1). Since the *OCI* measures subunit level phenomena (shared norms and expectations) on the basis of information gathered at the individual level, the procedure recommended by James, Demaree, and Wolf (1984) was employed to check the appropriateness of this aggregation. Results indicated a high level of within-unit agreement for each of the twelve *OCI* styles, with mean interrater agreement of .83, with a range from .77 to .88. Then the organizational subunit culture factor culture scores were "assigned" back to each individual record. This was done so that group norms and expectations can be used as an individual level independent variable with the individual level dependent variables of trust (H4) and distrust (H5). Managers' ratings of employees' performance were matched with employees' survey data to create a "matched" individual level dataset (descriptive statistics and correlations are reported in Table 1). Restrictions on data collection imposed by the research site limited the number of matches that could be made (n = 222); the matched dataset is fairly representative of the larger dataset.

To assess the discriminant and construct validity of the *WBS–S* and *WBS–O*, individual items were each in turn factor analyzed (varimax rotation) to provide support for the argument that trust in supervisor and distrust in supervisor (and organization) are distinct from the underlying social and transactional beliefs as presented in the model. The results of the factor analysis are consistent with theoretical assignment of items to scales. It appears that the *WBS–S* and *WBS–O* possess discriminant validity inasmuch as they distinguish between (a) the trust subscales, (b) between trust and distrust subscales, (c) between behavioral intention and beliefs subscales, and (d) between social and transactional exchange with each focal target. As an additional test of discriminant validity, the regression equations with in-role and extra-role performance as dependent variables were each run again using the matched dataset (n = 222) with trust in supervisor entered into the equation first, and distrust in supervisor specified as the second independent variable entered. The change in the F statistic indicates statistical significance ($p < .001$) of distrust in supervisor for both in-role ($F_\Delta = 21.82$), and extra role performance ($F_\Delta = 26.15$). This supports the definition and operationalization of trust and distrust as unique behavioral intentions. Further, the entire dataset was searched for cases where the trust and distrust factor scores were both greater than 1 (and alternately, less than –1). Using this stringent test, 20 (2.2% of the 881 cases available) and 38 (4.3%) cases were so identified trust and distrust, in supervisor and organization, respectively. These results support the notion of trust and distrust as distinct constructs, consistent with the proposed model.

Table 1. Descriptive statistics and correlations for individual (lower-left triangle, n=881) and "matched" cases (upper-right triangle, n=222)[a]

Level	mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13
mean, n=222				-.11	-.12	-.10	-.11	.	.	.	.	.	.	3.87	2.27
s.d., n=222				.93	.92	1.03	.94	.	.	.	.	.	.	.91	.74
Behaviors															
1 Continued membership	4.63	2.06	.	.	.	.	.	.	.	.	.	.	.	.	.
Behavioral intentions															
2 Trust in supervisor	-.09	1.00	.01	.	-.15	.71‡	-.01	.	.	.	.	.	.	.21‡	.31‡
3 Distrust in supervisor	-.05	.96	-.23‡	.00	.	-.29‡	.24‡	.	.	.	.	.	.	-.32‡	-.35‡
4 Trust in organization	-.07	.98	.12‡	.65‡	-.19‡	.	-.03	.	.	.	.	.	.	.24‡	.30‡
5 Distrust in organization	-.06	.99	-.56‡	.07	.25‡	-.01	.	.	.	.	.	.	.	-.02	-.07
Beliefs															
6 SEx–supervisor	.06	.97	.29‡	.29‡	-.45‡	.35‡	-.20‡	.	.	.	.	.	.	.	.
7 TEx–supervisor	.01	1.01	-.26‡	.04	.43‡	-.03	.29‡	.00	.	.	.	.	.	.	.
8 SEx–organization	.03	.96	.26‡	.20‡	-.14	.31‡	-.20‡	.50‡	.06	.	.	.	.	.	.
9 TEx–organization	.02	1.01	-.34‡	.08	.35‡	-.08†	.32‡	-.14‡	.57‡	-.03	.	.	.	.	.
Norms															
10 Constructive norms[b]	.07	.24	.05	.13‡	-.08	.16‡	.06	.16‡	.03	.07	-.04	.	.	.	.
11 Defensive norms[b]	-.03	.33	-.10†	-.01	.03	-.01	.05	.06	.06	-.04	.11‡	.06	.	.	.
Behavior															
12 In-role performance[c]	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.83‡
13 Extra-role performance[c]	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Notes. [a] SEx – Social exchange; TEx – Transactional exchange. † $p < .05$, ‡ $p < .01$. [b] n = 881. Norms are subunit average scores, "tabled" to individual cases.

All hypotheses were tested using multiple regression. Culture was first entered as an independent variable into the regression equations for H4-5; the resulting regression residuals were used in subsequent regression equations for each dependent variable, for several reasons. First, shared norms can have a broad and pervasive influence on organizational behavior; their influence on members' thinking and behavior has been found to be significant (Cooke and Szumal, 1993). Second, this method is most appropriate in a two-level hierarchical design, with individual responses "nested" within organizational subunits (Bryk and Raudersush, 1992). The chronological ordering of data used corresponds to the theoretical location of variables in the model.

Results

The regression results for hypotheses tested using the individual dataset are presented in Figure 1; a summary of results obtained regarding all of the hypotheses tested is presented in Table 2. Shared norms and the nature of the social/transactional exchange relationship with an individual's supervisor and organization account for a significant 11% of the variance in employee's in supervisor, 17% of the variance in employee's trust in organization, 38% of the variance in distrust in supervisor, and 12% of the variance in distrust of work organization (all at $p < .001$). Thus, general support was found for many but not all of the linkages proposed in the model. Of the 28 hypotheses proposed, 14 of the hypotheses were supported as predicted. Support was found for another 2 hypotheses, but this support was found in the opposite direction relationship than was hypothesized. Mixed support was found for one other hypothesis based on subsample results. Non-significant results were obtained for 11 of the 28 hypotheses.

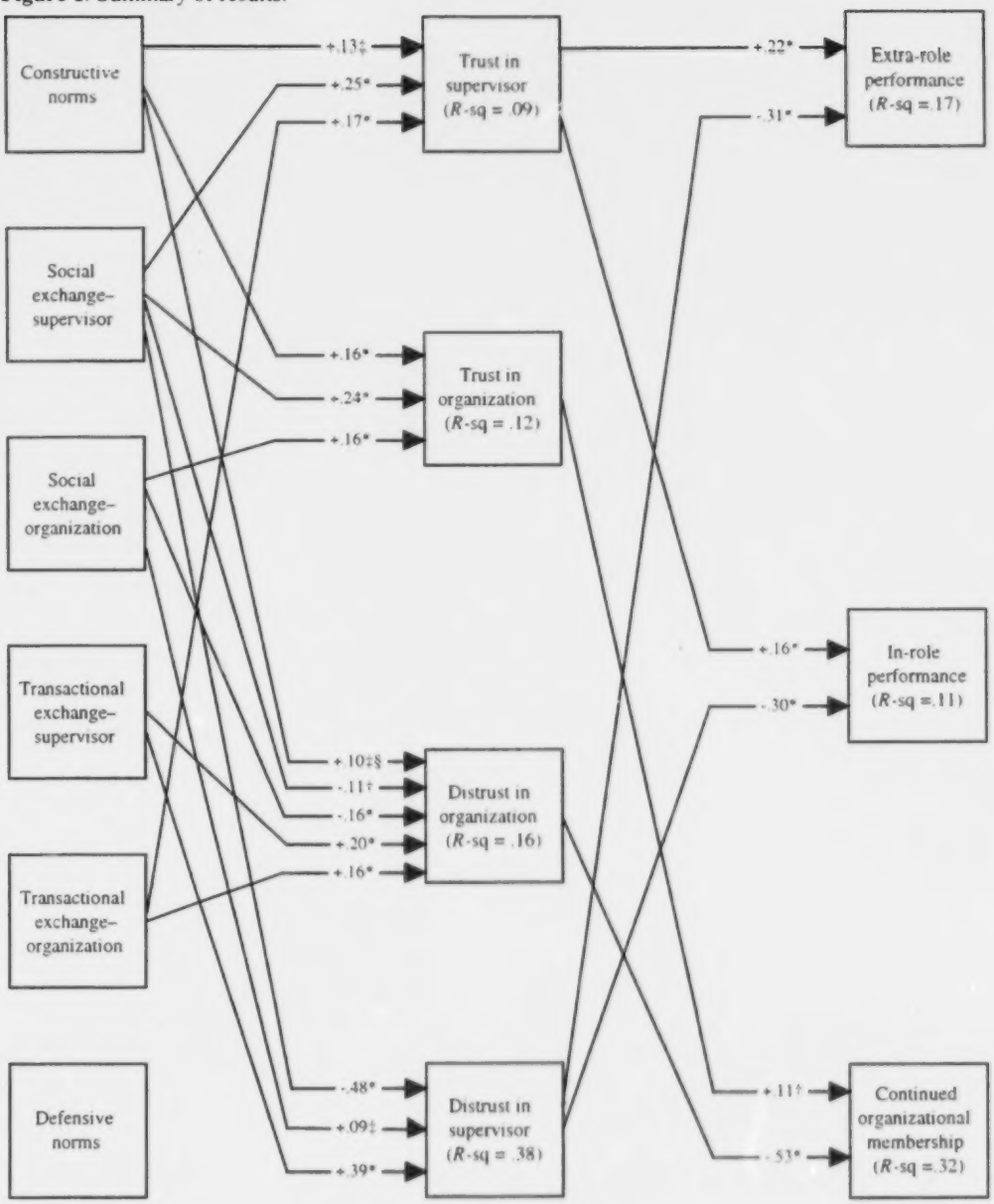
Discussion

Implications for Practice

Managers' skills, in particular, their ability to develop social exchange relationships, have a positive impact on employee performance. This study found trust in supervisor to be positively related and distrust in supervisor to

be negatively related to in-role and extra-role performance, underscoring the need for selecting and developing managers who can develop social exchange relationships with their staff. Employers should pay close attention to situations where managers are perceived as having primarily transactional exchange work relationships. These findings suggest that organizations should be cautious in the framing of benefits or other compensation programs for organizationally members that might be perceived as entitlements or rights; such framing may be highly counterproductive. Attempts by organizations to make extra-role behaviors part of stated job expectations, as Organ (1990) has suggested, may be also be counterproductive. If employers define away heretofore extra-role contributions, employees may seek non- work outlets for their discretionary efforts. Finally, these results reinforce the importance of a leader's credibility during change; careful work with message and messenger can minimize the dissonance that can rapidly unravel trust.

Figure 1. Summary of results.



* $p < .001$, † $p < .01$, ‡ $p < .05$. § Significant results from simultaneous regression. All R^2 are significant at $p < .001$.

Table 2. Supported and nonsupported hypotheses

Hyp.	Independent variable	Direction	Dependent variable	Results
1.1a	Trust in supervisor	+	Continued organizational membership	ns
1.1b	Trust in organization	+	Continued organizational membership	*Supported*
1.2a	Distrust in supervisor	-	Continued organizational membership	ns
1.2b	Distrust in organization	-	Continued organizational membership	*Supported*
2.1a	Trust in supervisor	+	In-role performance	*Mixed support*
2.1b	Trust in organization	+	In-role performance	ns
2.2a	Distrust in supervisor	-	In-role performance	*Supported*
2.2b	Distrust in organization	-	In-role performance	ns
3.1a	Trust in supervisor	+	Extra-role performance	*Supported*
3.1b	Trust in organization	+	Extra-role performance	ns
3.2a	Distrust in supervisor	-	Extra-role performance	*Supported*
3.2b	Distrust in organization	-	Extra-role performance	ns
4.1a	Social exchange-supervisor	+	Trust in supervisor	*Supported*
4.1b	Social exchange-organization	+	Trust in supervisor	ns
4.1c	Social exchange-supervisor	+	Trust in organization	*Supported*
4.1d	Social exchange-organization	+	Trust in organization	*Supported*
4.2a	Transactional exchange-supervisor	-	Trust in supervisor	ns
4.2b	Transactional exchange-organization	-	Trust in supervisor	ns, *Opposite supported*
4.2c	Transactional exchange-supervisor	-	Trust in organization	ns
4.2d	Transactional exchange-organization	-	Trust in organization	ns
5.1a	Social exchange-supervisor	-	Distrust in supervisor	*Supported*
5.1b	Social exchange-organization	-	Distrust in supervisor	ns, *Opposite supported*
5.1c	Social exchange-supervisor	-	Distrust in organization	*Supported*
5.1d	Social exchange-organization	-	Distrust in organization	*Supported*
5.2a	Transactional exchange-supervisor	+	Distrust in supervisor	*Supported*
5.2b	Transactional exchange-organization	+	Distrust in supervisor	ns
5.2c	Transactional exchange-supervisor	+	Distrust in organization	*Supported*
5.2d	Transactional exchange-organization	+	Distrust in organization	*Supported*

Efforts to increase trust or overcome distrust may or not be appropriate for a specific organizational setting. One ethical concern is the ends for which trust is being cultivated and the sincerity of the agent; another is the misdiagnosis of the environment or relationship as being characterized as low in trust. A potential solution would appear to have at least two steps: a) the diagnosis of the situation as being low trust or high distrust (or both), and b) the intervention occurring at the right level on the right issue. The *WBS–S* or *WBS–O* might be a starting point for such an effort. Another application of the *WBS–O* might be as a leading indicator of potential turnover. Early identification of deterioration of members' trust in their organization may be a first step in preventing turnover and its potential effects on organization or subunit performance.

Implications for Research and Theory

The present research suggests a number of potential avenues for future research. These results suggest that future theory on continued organizational membership account for both individual, institutional and structural factors contributing to organizational exit/withdrawal. Although it appears that the in-role performance measure met the criterion of face validity in the current research site, the in-role/extra-role boundary may well remain moving, blurry, or nonexistent across organizations. Future work on extra-role performance should clarify this issue.

Future research on trust and distrust might deploy the *WBS–S* and *WBS–O* in a variety of settings, including trust between co-workers, team members, organizations, and managers towards subordinates. In HRD, these measures might be adapted to explore successful practices for the developing trust through interventions, and the limits and appropriateness of such practices in different settings. Research might be conducted to explore how organizational decisions that reduce the amount of exchange currency provided to employees (e.g., layoffs, benefits) can be assimilated by employees without significantly engendering distrust. Distrust may be a barrier to employees' participation, suggestion-making, whistleblowing, and desire to communicate work-related mistakes or problems.

Lack of trust may suppress each of these sets of behaviors; distrust may suppress these behaviors and their concomitant organizational benefits even further. Distrust may result in revenge or in violence in the workplace, and may be engendered by how change is implemented and how individuals' concerns are addressed during change. Future research also might explore of how managers and organizations can build social exchange relationships. Research on psychological contracts, which has centered on the content of member-organization relationships at the exclusion of leader-member relationships, might refocus on how managers develop the desire and ability to cultivate social exchange relationships with employees. The *WBS–S* and *WBS–O* might be used to explore the impact of social and transactional exchange beliefs on group and organization performance.

In summary, this study set out to answer several questions surrounding trust and distrust: (1) Do behavioral-intention definitions of trust and distrust have utility to researchers? (2) Do these definitions serve to integrate existing work on trust and distrust and lead to new, more promising directions for better understanding the dynamics of trust and distrust in work organizations? (3) Can this research provide insights for practice? and (4) Can these measures of trust and distrust aid in better understanding the dynamics of these constructs in work settings? The answer to each question appears to be affirmative. The results of this study hold promise for a fuller understanding of trust and distrust and ideas on how to act to overcome distrust and build trust and productive relationships at work.

[1] This paper is based on the authors's doctoral dissertation, completed at the University of Illinois of Chicago. Due to space constraints, complete reporting of methods employed is not possible. For more information, contact the author. For a limited time, copies of the *WBS–S* and *WBS–O* are available at nominal cost to organizations and researchers who provide data for the surveys' norms database. Contact: ValueWorks, Inc., 20906 West Bloomfield Drive, Plainfield, IL 60544.

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Work Culture Adjustment: A Critical Ingredient to Organizational Change

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As organizations evolve into learning organizations, changes in the work culture require employees to take on new roles and skills. Skill deficits are often more easily addressed than employee acculturation to new role expectations. Those responsible for employee development must address the extent to which desired changes will conflict with employee values, attitudes, opinions, and ideas surrounding what are considered to be the legitimate work roles if the learning organization is to be truly realized.

Keywords: Organizational Learning, Culture, Change

The Problem

As organizations move toward becoming learning organizations, employee expectations change along with the work culture of the organization. Employees are expected to have more involvement in decision making, maintaining their skills, and monitoring their own performance. They are expected to work in teams, improve work processes, and monitor accomplishment of organizational goals. These new expectations require both new skills and a change in how employees perceive their work roles. Some employees who have been comfortable and able to work in an environment where they were told what to do, how to do it, and someone else was responsible for judging if it was done correctly are not comfortable or able to work in such a new environment. They are reluctant or unable to make the adjustment to taking responsibility for their own learning and performance or contributing to the evolving knowledge of the organization. The solution has often been to apply standard training procedures to prepare the employees to operate in the new environment. Those procedures include doing a needs assessment of the psychomotor, cognitive and affective skills required, developing training programs, providing training, and assuming that once the employees know what to do and how to do it they will do it. This training model assumes that the problem is a lack of skills to perform in the new culture. For some employees this methodology works, however, for many others it does not because their problem is not a lack of skills but the comfort they feel with occupying the new roles required in this new cultural setting. Self-learning, taking responsibility for actions, contributing to decisions, and making decisions may not be consistent with the employees' perceptions of themselves as workers. Training them in how to do what is desired will not necessarily lead them to actually doing it because such actions may conflict with their basic self-image and what they consider to be a desirable work culture. For these people, employment failure during organizational change seems to be more highly associated with failure to adjust to the work culture associated with new job expectations than to a lack of skills.

For example, a large plant decided to change its organizational structure to the use of work cells within which production workers were to work in groups responsible for ordering materials, ensuring productivity, and ensuring quality. This was a radical change from their past responsibilities where they were responsible for operating their own equipment under the direct supervision of a supervisor. The supervisor had been taking responsibility for making sure the materials were available, that each person was meeting their quota, and that the quality of the products met specifications. Employee development personnel interpreted the major skills deficits to be making sure employees knew how to operate the computerized ordering and inventorying system, how to work in teams, and how to interpret required documents. After training the employees had the skills, however, things did not go smoothly. The question was why were these skilled people not performing as expected? After interviewing the employees it was found that they did not think it was reasonable for the company to ask them to work in this new way. They never worked like that before and did not feel they should take on such responsibilities. They considered themselves to be machine operators. Further probing revealed that their reluctance to take on the new responsibilities was driven by the fact that they did not feel comfortable. They were scared. Therefore, interventions were needed where employees could vent their concerns and where they could be shown not only why they needed to implement the new way of doing things, but how they should view their new roles with assurance that they were not taking on unreasonable roles and personal risk. The question facing employee development personnel was how to design and implement such interventions

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Such situations are not atypical. The challenge is to help employees prepare to cope with the new responsibilities which are in conflict with their past visions of their legitimate roles in the employment environment. As Argysis and Schon (1978) have stated, "There is no organizational learning without individual learning, and that individual learning is a necessary but insufficient condition for organizational learning" (p. 20). One could go one step further and say, there will be no individual learning unless individuals feel comfortable with where that learning is heading.

The Underlying Phenomena

Organizational change that affects employee expectations creates uncertainty within employees about the adequacy of their behavior and leads to anxiety and feelings of insecurity. If the differences in expectations between the new and old are not too large, employees will be able to adapt relatively quickly and again begin to feel a sense of comfort with the new culture. If the differences are large, they may not be able to accommodate and their insecurities will drive them to resist culture change even though they have the necessary skills. Within an organization some employees such as managers and supervisors typically perform in roles where they are required to make observations and apply knowledge to decision making, and to be accountable for their decisions. For these employees, adopting the culture of a learning organization represents less change. However, setting up these expectations for skilled workers and technicians who have been expected to take explicit directions from mangers and supervisors who have been responsible for their productivity represents a major leap. Such employees require more assistance than just help in developing the interpersonal skills, learning skills, and decision-making skills required in a learning organization. They need assistance in gaining comfort with the new environment so they feel comfortable meeting the new expectations.

Acculturation - Related Theoretical Models

Although there has been essentially no literature developed which directly addresses this problem as it affects organizational change, those who have studied the effects of cultural changes when people move between countries and geographic locations can provide insights into the problem. The same phenomena, which they describe, seem to have meaning when related to organizational change. Cross-cultural social scientists define this problem as one of acculturation. What is known about the processes underlying acculturation? Acculturation, according to Szapocznik and Kurtines (1980), consists of two independent and separable processes: (a) accommodating to the new culture, and (b) retaining or relinquishing the old culture. This suggests that as an organization changes its culture, individuals try to adapt to the new while retaining parts of the old they consider to be important.

Boekestijn (1988) indicates that in addition to cultural adaptation that can be viewed as adjustment by an individual to the new culture, individuals simultaneously experience a need for identity maintenance. This can be viewed as the self-concept adjustment required within an individual as they adjust to the new culture. For example, if a person who has been a machine operator in the factory who has been told exactly what to do and how to do it, is now asked to become part of a team to improve production processes, develop new skills needed to participate in the new processes, and be responsible for monitoring the quality of what she/he produces, the person would need substantial realignment or adjustment in their work self-identity.

The "clash" that occurs between the old and the new cultures has led Berry (1980) to identify four patterns of acculturation according to whether a person decides to try and retain past cultural identity and/or to seek positive relations with the new culture:

1. Assimilation - continuous movement toward the new culture, relinquishing the old culture;
2. Integration - synthesis of the two cultures (i.e., retaining both);
3. Rejection - of the new culture and reaffirmation of the old culture; and
4. Marginalization or "deculturation" - alienation from both cultures.

Berry points out that the particular pattern an individual adopts in reference to a new culture is strongly influenced by the strength of reinforcement factors within the person's past culture. For example, if a person is a member of a union that clearly defines the legitimate roles for its members and the new culture seems to conflict with those roles, there will be more resistance. Or, if the person comes from a family where the work culture belief is that they are workers who are to do only what others tell them to do without question, he/she may view taking responsibility for

new roles as inappropriate. Rejection and marginalization are more likely if the old culture is supported by such factors that reinforce strict adherence to the old culture and are in conflict with the new culture.

As people attempt to adapt to a different work culture, they go through a number of adjustments. Gudykunst and Hammer (1988) identify two emotions that must be dealt with during cultural adaptation: uncertainty (not being sure how to behave), and anxiety (feeling a lack of security). Ruben and Kealey (1979) identify three stages of successful cultural adaptation. First, people experience an initial, often transitory reaction during the first few weeks in a new culture that has been widely called "culture shock" (Oberg, 1960). This phenomenon has also been identified by Byrnes (1966) as "role shock". Culture shock is the realization that the new culture is not like the old and that the "rules of the game" have changed. Second, as culture shock subsides, psychological adjustment begins and people try to become more comfortable in the new culture and to improve their general psychological well being. Third, if psychological adjustment is successful, with time many people rise to a level of being able to interact effectively in the new culture, and cultural adaptation is achieved. However, those people who cannot make adequate psychological adjustment will likely return to the old cultural norms, and if they cannot do so, they will withdraw. Withdrawal can manifest itself in many ways. Often, it results in people going through the motions to seem to be cooperative but not actually contributing to the organization's goals.

Grove and Torbiorn (1985) present three psychological constructs which can be helpful in understanding how performance is affected during the acculturation process: (a) applicability of behavior, (b) clarity of mental frame of reference, and (c) level of mere adequacy. Applicability of behavior refers to the extent to which a person's behavior is consistent with the behavior expected in the environment, and is socially acceptable and is interpersonally effective. In other words, applicability of behavior is the extent to which an individual is performing to the expectations of the organization. Frame of reference refers to the extent to which a person's values, attitudes, opinions, ideas, and knowledge are internally consistent within an individual and consistent with the new culture. The more consistency, the higher the clarity of the frame of reference. If the new cultural expectations are viewed as similar to the old cultural expectations, the new culture will be consistent with an individual's frame of reference. If the new expectations are significantly different from the old cultural expectations, the person's clarity of frame of reference will be low. The new culture will not be consistent with the individuals past values, attitudes, opinions, ideas, and knowledge. Level of mere adequacy refers to behavior that is barely acceptable and minimally effective. It is the lowest level of behavioral adequacy that reflects minimal adjustment to the expectations of the new environment.

In a highly familiar environment, a person's levels of applicability of behavior and clarity of frame of reference are both high, and therefore, performance is usually much higher than being merely adequate. When a person enters a highly unfamiliar environment, the model suggests that the process of successful cultural adjustment or adaptation occurs in four distinct stages.

Stage I - Applicability of behavior drops below the level of mere adequacy, but clarity of frame of reference remains high. This is the stage in which tourists find themselves: even though their behavior does not quite apply, they retain their frames of reference because they know that their stay is temporary and they will soon be returning to their familiar environments. This stage is similar to "culture shock." This is likely to occur when the organization begins to change its culture. Many employees will tend to feel this will pass and do not pay much attention to it.

Stage II - Applicability of behavior remains below the level of mere adequacy and clarity of frame of reference drops. This occurs among those who realize they will not be returning to the familiar cultural environment and find their old frames of reference as well as their behavior ineffective or inadequate.

Stage III - Typically, with training or experience, applicability of behavior rises above the level of mere adequacy, whereas clarity of frame of reference lags behind. For example, some people learn the types of job skills required on the job but their sense of personal security and comfort has not yet been established. They are still not able to perform at their full potential.

Stage IV - Both applicability of behavior and clarity of frame of reference continue to improve and performance rises above the level of mere adequacy to desired performance levels.

Implications for Organization Development and Training

Organizational change is implemented to improve the quality and productivity of an organization. Creating a learning organization is founded on the premise that all employees should be involved and contribute their knowledge to the collective knowledge of the organization as it evolves. A further assumption is that employees in a learning organization will perform beyond the level of mere adequacy. The various theories presented above have a number of common threads that must be considered as organizational change takes place. First, a change in culture has a profound effect on employees. The ease with which individuals can adapt to such change is affected by many factors, two of which are the extent to which the new culture is different from their past work culture, and the extent to which the old culture is reinforced by other factors in an individuals environment.

Second, adapting to a change in culture requires not only learning new skills but it requires an adjustment in self-concept. Different cross-cultural scholars have addressed this issue in various ways, Grove and Torbiorn refer to this process as adjusting clarity of frame of reference, Gudykunst and Hammer refer to it as reducing uncertainty and anxiety, Boekestijn refers to it as maintaining identity, and Szapocznik and Kurtines refer to it as accommodating the new culture and relinquishing the old.

How can trainers help employees with adapting to a new organizational culture? First, they must obviously help the employees to develop the skill sets required in the new culture. These might be technical as well as interpersonal skills. But beyond skill training, attention must be placed on addressing the stress and anxiety that comes from culture change. The process might start with an analysis of the differences in expectations between the new and old culture. For example,

Old Culture	New Culture
1. Work Instructions a. Given by the supervisor b. Explicit to exact method of carrying out the tasks c. Management will determine the method	1. Work Instructions a. Given by the supervisor b. Work group expected to develop and recommend best process c. Each employee is expected to contribute to the process
2. Method of judging performance a. Supervisor	2. Method of judging performance a. Supervisor, and b. Workgroup - each employee is expected to rate the productivity of each other member
3. Responsibility for training a. Company	3. Responsibility for training a. Company - for company wide initiatives b. Employee for specialized employee skills
4. Work environment a. Work alone	4. Work environment a. Work as part of a team

The analysis might then continue with a traditional analysis of the types of skills a person will need in order to function in the new culture. Given the example above, the employees might require teamwork skills, performance assessment skills, etc. But in addition, they will need to adjust mentally regarding the new expectations and their roles in carrying them out. For example, their comfort with and beliefs about: (a) evaluating their performance or the performance of others, (b) working in teams to helping set work expectations and develop work processes and then to implement them, and (c) assessing the specialized skill sets they need and taking the initiative to develop them. These less tangible skills also need to be analyzed and attempts need to be made to help employees adjust their frames of reference if the employees are going to move beyond the level of mere adequacy. If these frame of reference items are not addressed, it is unlikely that individuals will participate fully in the organizational change and the benefits of a learning organization will not be fully achieved.

One technique for identifying interventions which might allow employees to adjust their frames of reference and embrace the new culture more quickly might begin with a list of the differences between the new cultural expectations and the old, as was exemplified above. The next step would be to ask employees within

different sub-cultures associated with various types of jobs within the organization to review the differences and have them indicate their comfort with behaving in the new ways and why they feel they are or are not appropriate. This information could be gathered in group sessions or with anonymous questionnaires. The information could then be used to develop materials and to conduct discussion sessions focused on addressing the barriers to adopting the new culture. If employees are uncomfortable with implementing new expectations, process facilitators might be needed during the initial phases of adopting the new culture. For example, teams might be led by facilitators who would concentrate as much on how people were feeling about implementing the new expectations as on the processes for implementing the new expectations. The emphasis would not be on how they felt about the team processes but about their participating in teams to meet organizational expectations. The information might also be used to identify factors in the environments of the employees that tend to reinforce the old culture in opposition to the new. For example, if union expectations are not consistent with the new culture, there may be a need for discussions with the unions aimed at resolving differences. If employees' families are identified as external factors inhibiting change, materials focused on influencing family views about the value of employees working differently might be appropriate.

After analyzing the skill sets needed by employees to meet the new cultural expectations and factors affecting their frames of reference, the two lists could be reviewed to determine where to start implementing the change. Training could then take place on the skill sets required and interventions could be designed to address frame of reference concerns. Training and the interventions would probably need to take place on both sets simultaneously. The challenge will be to determine which is the most significant barrier to each specific performance expectation. Is it the lack of skill that is affecting a person's frame of reference or is it the person's frame of reference that is affecting their ability to develop and implement the skill set? If employees do not see a need for or are not interested in developing a skill set, they probably do not see value in it or do not believe in it. Therefore, frame of reference interventions might often be the first level of intervention in organizational change, often preceding training.

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The Moderating Effects of Individualism and Collectivism on HRD as an Instrument of Modernity

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This paper challenges the ability of Western-based models of HRD to culturally contribute to organizational modernity in developing countries. Constructs of individualism and collectivism provide the basis for theoretical discussion. Exerts from studies conducted in Cote d'Ivoire, Ghana, and Senegal offer illustrative examples.

Key words: Organizational Modernity, Individualism/Collectivism, Culture in developing nations

In recent years, scholars have explored how new forms of organizational design and development might improve the productivity and international competitiveness of emerging and transitioning economies. Much of this inquiry has occurred through the ideological lens of modernization theory (Bradshaw & Wallace, 1996,). This view emphasized cultural, economic, and institutional factors within countries to explain why some regions and countries were richer, more democratic, technologically advanced, and internationally competitive than others. To study the cultural factor, researchers found it attractive to focus on the constructs of individualism and collectivism (I-C). This theory suggested that collective societies were less advanced because they discouraged innovation, risk-taking, competition, and personal recognition and achievement (e.g. Hofstede, 1980; 1991; Giddens, 1991; Schwartz, 1994; Triandis, 1995). Indeed, much research suggests that collective societies are, for the most part, less modern (Hofstede, 1991; Triandis, 1995).

Collectivism, in less modern societies, presents a formidable challenge to Western based HRD models that are grounded in the cultural norms of individualism. In addition to different concepts of self and group behavior, our understanding of collectives is made more difficult because of the underestimated and potentially destructive power of group alliances. That is, the solidarity found in collective cultures can cause not only fierce loyalty within groups, it can lead to territoriality and rivalry between groups in the workplace. In culturally heterogeneous societies, these trends can dominate organizational life and fragment HRD attempts at advancement through the erosion of trust and cooperation. Such is the case in many developing nations; especially those found in Africa.

This paper will present a theoretical discussion of the moderating effects of I-C on HRD as an instrument of modernity in lesser-developed nations. Three points will shape this discussion:

1. The human side of organizational advancement and modernization requires workers to trust and cooperate with one another. Aspects of I-C influence trust and cooperation.
2. Western based HRD models encourage organizational advancement and modernization, through trust and cooperation, by appealing to the attributes of individualism.
3. These values are at odds with collectivists and can thwart advancement and modernization in collective cultures, especially in culturally heterogeneous nations.

Modernization, Trust and Cooperation

Modernization theory divides the world into two categories, the modern and the less modern or traditional. Higher levels of industry, advanced technology, an educated population, a large middle class of consumers, low unemployment and food sufficiency characterize modern nations. Culturally, the modern world values, for example, a strong work ethic, clear goals, timeliness, creativity and initiative, entreprenurialism, savings and investment. The traditional world exemplifies opposite values and characteristics (Rostow, 1960). Modernization theory is, in essence, a theory of social change (Bradshaw & Wallace, 1996). Thus, with the assistance of Western, more modern, countries, lesser-developed nations will become modern economies, institutions, and cultures. The major risk associated with this theory is its ethnocentrism; the notion that the West is best and that one model can fit all. Scientists and international development leaders now recognize that development efforts often fail because they imposed Western models that were culturally foreign (Jones, 1989; Dia, 1996). That is, Western-based efforts must

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have the buy in and trust of the local recipients. To ensure trust and cooperation in change interventions, new approaches and models must be culturally sensitive to current values and belief systems (Rogers, 1973).

In general, it appears that high trust cultures are associated with modern organizations. Trust promotes cooperation (Mayer, Davis & Schoorman, 1995;McAllister, 1995) which can contribute to organizational effectiveness through extrarole behavior and better citizenship (Organ & Ryan, 1995; Van Dyne, Cummings & Parks, 1995). Many researchers have additionally argued, for example, that high trust cultures support cooperation and teamwork (Jones & George, 1998), innovation and synergy (Fukuyama, 1995), strategic alliances (Das & Teng, 1998), and a competitive advantage (Barney & Hansen, 1994).

For trust to transpire, certain conditions are necessary which include risk and interdependence (Rousseau, Sitkin, Burt & Camerer, 1998) and venerability (Bigley & Pearce, 1998). In essence for trust to occur, individuals must be open and willing to believe in the goodness of others and depend on them for help in times of perceived threat. Equally important, was Rotter's (1980) research as reported by Bigley & Pearce. Rotter concluded that one's predisposition to trust is influenced by one's early life experiences, which suggests that the cultural referent of one's family and kin is especially meaningful. Also addressed was the importance of trust in situations of change. According to Rotter, as situations become increasingly unfamiliar, the influence of one's predisposition to trust has more influence over behavior. Thus, alien situations, such as the modernization of an organization's HRD practices, will enhance a natural inclination to trust or distrust while greatly influencing the willingness to depend, share, and cooperate.

Trust and cooperation are also culturally bound. Culturally contingent models of trust (Doney, Cannon & Mullen, 1998) and cooperation (Chen, Chen & Mendl, 1998) have been tied to I-C. Both models suggest that individualistic cultures are more calculating in their decision to trust and cooperate. Issues of professionalism and performance influence individualists. They expect their partners to full fill contractual arrangements and treat each other fairly. Moreover, individualists are likely to join groups only when this is instrumental to their personal goals. Collectivists, on the other hand, are more affective in their reasoning. Role expectations are not confined to task performance nor are they formally prescribed. Enduring social relationships that are both formal, i.e. ethnic ties and informal, i.e. school friendships drives trust and the willingness to cooperate. For individualists, emotional trust rarely comes before cognitive trust. The reverse is true for collectivists.

Culture, Collectivism and Individualism

All cultures operate from conceptual prototypes by creating belief systems to filter expectations for appropriate and inappropriate behavior. Business cultures are influenced by the societies in which they reside (Hofstede, 1980). Their work along with that of Adler (1997) and Laurent (1986) suggested that professional and organizational beliefs are shaped during childhood and are determined by family and societal referents. Given the early influence of kinship and community values, it follows that these belief systems retain a great deal of power, especially in culturally diverse nations, and that such early ties play strong roles through one's lifetime.

In addition to constituting a set of beliefs, culture is also a source of solidarity in both a territorial and spiritual sense (Bruner, 1990; Hamill, 1990). These ties tend to cause members of a given culture to see themselves as separate and unique. As cultures are, to a certain extent, ethnocentric (Adler, 1997), cultural groups, in many cases, tend to see themselves as superior to those of other cultures. In turn, cultural solidarity is emphasized and increased when individuals from one culture come in contact with those of another (Adler & Graham, 1988). What occurs is a tendency to protect and defend one's cultural identity as a way of maintaining the integrity and relative importance of its beliefs and values.

In recent years, scientists (e.g. Triandis, 1972; 1995; Hofstede, 1980; 1991; Trompenaars, 1993) have advanced the use of collective and individualistic constructs in the cross-cultural study of societal and work cultures. The following is a listing of conceptual attributes for individualism and collectivism as defined by Hofstede's 1980 study of IBM employees in 50 countries.

Individualism
"I" consciousness (self-orientation)
Value individual accomplishment
Tolerate individual behavior and opinion
Low loyalty to other people and institutions
Interact on an individual, competitive basis
Loose interpersonal ties

Collectivism
"We" consciousness (group orientation)
Value joint efforts and group rewards
Norms for behavioral conformity, personal opinions do not exist
High loyalty to other people and institutions
Interact in an interdependent, cooperative mode
Strong interpersonal ties
Group protection in exchange for unquestioning loyalty
Importance of harmony; saying no is considered confrontational

It is important to note that I-C is a continuum. That is, cultures may exhibit aspects of each dimension. The differential is where they place their priorities. For example, both individualists and collectivists may hold individual opinions as well as conform to group norms. A culture is classified, in this case, as either individualist or collectivist because of the relative importance it places on opinion types. In general, scholars agree that collective cultures are interdependent, place priority on communal goals, focus on group norms, obligations and duties and on relationships even when they are disadvantageous. The opposing attributes associated with individualism have been linked with modernity (Hofstede, 1980, 1991; Triandis; 1995). Triandis developed a model of cultural movement from collectivism to the modern state of individualism. He identified mobility, affluence, job specialization and exposure to mass media as contributors to this shift.

An aspect of the I-C dimension, that is extremely important to this paper is the tendency for collectivists to make a greater distinction than individualists between in-groups and out-groups (Triandis, 1995). Collectivists compete (Espinoza & Garza, 1985) more vigorously, exploit (Pandey, 1986) and are less likely to share information (Triandis, 1995) with out-groups than individualists. The importance of these issues has led not only to civil war, but also to the preferential allocation of jobs, public works, and educational opportunities.

Individualism in American HRD Beliefs

American culture has been classified as highly individualistic (Hofstede, 1980; 1991; d'Iribarne, 1989). Organizational cooperation and trust in American corporations is possible when people feel secure in their individual rights. Americans want to believe that their individual efforts and, in particular, the willingness to go the extra mile, will make a difference to the overall outcomes of the organization. Likewise, they as individuals, will benefit respective to the effort that they personally contribute.

To guarantee independence in work approaches and to ensure recognition for their accomplishments, Americans symbolically think of work as a contractual relationship with detailed limits, rights, and expectations (d'Iribarne, 1989). In his ethnography of the American workplace, d'Iribarne found that individual self-reliance was critical to the cultural makeup of the United States because the American's greatest fear was to be dependent on others. The contract, he concluded, permits Americans to protect themselves from the arbitrary control of their superiors. A well-defined contract explains what the individual will sell of himself to an organization and what the individual can expect to receive in return for services rendered. Thus a contract, in the form HRD practices, promotes trust in the American workplace through its use of clearly stated job descriptions, promotional criteria, career paths, training objectives, etc. Such instruments define expectations and reduce the risk of subjectivity.

HRD principles and models were first developed in the West. Most specifically, we first saw a professional identity and an establishment of definitions and professional goals in the United States. Born out of a highly individualistic culture, American developed HRD models require the legitimacy of individual thought and development. This does not mean that group efforts are devalued. Rather, this means that the individual is not culturally subordinate to the group in his right to creativity contribute and learn.

The following are belief statements about American HRD functions. These assumptions were supported by Hansen, Kahnweiler, and Wilensky's ethnographic study of practitioner ideals and expectations for how their profession should be exercised (1994) and were reflected in research where HRD practitioners described their anticipated role and functional scope in American corporations (McLagen, 1989; 1993). McLagen's results were used by the American Society for Training and Development to develop a set of professional HRD competencies. Please note the following characteristics do not necessarily offer information about how HRD is currently practiced in organizations. They describe, instead, what American practitioners *believe to be true* about the purpose and goals of their field.

Training should permit individual learners to grow and develop beyond the present needs of his or her job. In addition to task-related material, trainees should learn about such skills as communication, team building, and strategic planning and participative management.

Career development should include committed, systematic, professional advising, career planning, career paths, developmental appraisal systems, and results tracking. Career planning should reflect an integration of individual and business goals.

Organizational Development should permit individuals and their organizations to move towards more collaborative, developmental, flexible, delayed, customer-focused cultures. It should enhance communication, work structures, and processes.

American HRD values, while encouraging collaboration, place emphasis on the developmental freedom of the individual and so, the locus of control is clearly personal. Thus, individual drive, creativity, and collaboration with other individuals can and should promote organizational development. Training, for example, is more than a job requirement. It is an opportunity for personal advancement. Such thinking may in part explain why American companies spend more on management development training than on any other form of corporate instruction. As Americans we believe in workplace democracy and that any individual who is willing to work hard at learning can advance if given the right educational opportunity. Even statements about organizational development, which is the category that focuses the least on the individual, encourage flexible work cultures where individual ideas and initiative can thrive through less bureaucracy and hierarchy. Likewise, shared decision making approaches imply that judgement should not rest in the hands of a select few; but rather the ideas of all pertinent individuals should be taken into account because creative perspectives and solutions can come from anywhere within an organization. Thus as the individual grows in responsibility and participation, so does the organization, as a whole.

HRD and Collectivism

In collective cultures, individual rights, freedoms, and accomplishments are not as important. What drives behavior is a deference to the group at the cost of individual or organizational performance. Thus, the locus of control is in the collective and not in the individual.

In the logic of collectivism, it would be appropriate to replace the term individual with the word group in beliefs statements associated with training, career, and organizational development. Likewise, the emphasis would be on relationships and how HRD practices might be used to reward group loyalty and advance the status and prospects of one's group. Conformity and group norms would be emphasized over individual growth and achievement. Finally, performance expectations would be nonspecific and remarks about results and objectives would be vague.

An important aspect of the collective model is group preservation. HR decisions in collective cultures, especially in socially heterogeneous societies where there are many different groups vying for position and advantages, are often influenced by the need to favor and reinforce the status of one's in-group at the expense of out-groups. In this case, the emphasis is not just on the group; it is on *protecting* the group. The obligation to protect safeguard's the group's survival, solidarity, and image. HRD models in collective cultures should be especially sensitive to this feature.

Data from three West African countries, Cote d'Ivoire (Hansen & Headley, 1998), Ghana (Gardiner, 1996) and Senegal, (Tidjani & Gaye, 1995) illustrated the characteristics of collectivism in societies that were socially heterogeneous, especially how the need to preserve and protect one's collective impacts the workplace. In Pan African terms (Binet, 1970; Khorza, 1993; Triandis, 1995) and on a regional basis (Hofstede, 1991) the value systems were described as consensual, nurturing, predisposed to high power gaps and possessing low levels of anxiety. Hofstede ranked West Africa, as a region, low on individualism with a score of 41 on a scale of 50 nations and three world regions.

Over 60 ethnic groups, each with their own language or dialect were reported for the Cote d'Ivoire. In Ghana and Senegal there were approximately 20 key kinship groups and languages. However, in Senegal religion sects played a stronger role in diversifying groups than ethnicity. In pre-colonial times, ethnic and religious groups were a part of a large West African empire that tended to bind groups under one hegemony while governance was decentralized. In essence, the notion of a nation state was artificially created by the Europeans as a way of balancing their political interests with those of their colonial rivals. Currently, the head of the largest ethnic group in Cote

d'Ivoire lives in Ghana. Given this tendency, it was not surprising that political boundaries have often been ignored by the local citizens as ethnic and religious groups retreated into the relative security, solidarity, and protection of their *own kind*.

In all three countries, the *obligation to protect* the in-group was key to understanding organizational behavior in all types of business, occupations and at all levels within a company. Members of the same in-group generally held positions of trust. Jobs were often unnecessarily created in order to provide employment for group members. Obligation pressures clouded issues of accountability, as kinsman believed that they were entitled to protection by other family members, regardless of their mistakes, which often complicated accountability and sanctioning measures. Moreover, managers distrusted their employees and vice versa. This lack of control and confidence in managerial competence were outcomes of subjective hiring and promotional methods. Obligation and protection concerns typically led to some degree of group rivalry and nepotism that impacted workplace decision-making and reward structures. As a result, less favored employees became demotivated, psychologically distanced themselves from their companies and unconsciously sabotaged attempts to transform work practices and attitudes.

Hansen and Headley's research yielded findings about HRD practices in the Cote d'Ivoire. In general, they found a lack of systemic and systematic approaches to training, career and organizational development. Training decisions, for example, were seldom linked to organizational needs and performance deficiencies. Career development was inconsistent and often occurred more as an informal form of mentoring between a manager and a favored employee from the same social network. In Cote d'Ivoire and Ghana, social relationships and group membership were discreet. It was simply known who was related to whom and who was a close friend of whom. In Senegal, sect solidarity was more obvious. Groups called *dahiras*, whose purpose was to reinforce both the spiritual and social aspects of their sect, openly existed and operated in the workplace.

Implications

While the moderating effects of culture are generally recognized as significant in HRD (Hansen & Brooks, 1994; Petersen, 1997) scant importance has been given to I-C. To develop culturally sensitive and appropriate interventions for nations with different value bases, we need to comprehend the cultural roots of our own models. The I-C dimension is a helpful tool for understanding the emphasis on the individual that is reflected in Western, especially American, developed approaches to employee and organizational development. These values, while linked to modernity, may not necessarily be an instrument of modernization. When models vary significantly from prevailing cultural norms, their acceptance can be delayed, distorted, or ignored. In short, HRD models grounded in the attributes of individualism may thwart trust and cooperation and thus be counterproductive in collective cultures.

The avocation of individualist values in collective societies is problematic in several ways. First, in collectives one's first consideration is to one's in-group. The expectation is that individuals will achieve, grow, and make organizational contributions that respect the needs and priorities of the group. When individual development occurs independently, in ways that do not respect group obligations, the individual is considered selfish and often penalized through social abandonment. Individual misfits must then psychologically deal with the sense of shame that comes from failing to protect one's in-group. Second, encouraging individualist values may diffuse the natural order of group solidarity and cause dramatic chaos that organizations may not be prepared to address. Dramatic change, in some cases, is the only way to transform nonproductive traditions. However, change of this magnitude goes to the heart of societal values and beliefs. Organizations must be able to offer the same emotional and financial support that group members find in their family and religious in-groups. Organizations must also be willing to make a long-term commitment to change, as transformation must additionally and perhaps first occur within society. Observers in Cote d'Ivoire estimated that it would take one to two generations to eradicate the collective solidarity of ethnic clans. Finally, the individualist's need for personal recognition, when elevated to the level of the group, may exacerbate competition and conflict between groups. Perhaps the aspect of collectivism that has been the most underestimated in importance is the rivalry between groups.

Three theoretical propositions emerged as a result of the arguments put forth in this paper. They are:

1. In culturally collective and socially heterogeneous countries where resources are limited, the obligation to protect one's ethnic in-group will counter the trust and cooperation needed to support organizational modernity.
2. Where organizational trust and cooperation are lacking, HRD interventions will be less effective.
3. HRD interventions grounded in the principles of individualism will be less effective in culturally collective and socially homogenous countries.

Research is needed that explores the I-C dimension in HRD in less modern nations. This paper discussed the two constructs as diametrically opposed. However, as earlier stated, I-C occurs as a relative continuum. That is, cultures *tend* to be more individualistic or collective. Thus a culture may have characteristics of both I-C. Scholars might question if the positive aspects of both constructs could be joined to reflect the relative tendencies of a given society. Culturally specific models of HRD could explore, for example, ways to encourage the spirit of individualistic creativity and performance that do not ignore the social solidarity of the group. It would be helpful to study these issues in real life situations of organizational change where tasks require people to trust and cooperate with one another. HRD models derived from ethnographic research would yield more culturally sensitive approaches through its emphasis on the emic perspective and the natural emergence of cultural categories and patterns. Likewise, longitudinal study could assess the effects of culturally specific interventions.

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HRD Faculty as Leaders: The Application of the Full Range Leadership Theory to Graduate Level HRD Instruction

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We used the Full Range Leadership (FRL) model to examine whether HRD faculty exhibit transformational, transactional, and laissez-faire leadership behaviors when conducting graduate level classes. Results are consistent with transformational leadership style. Transformational leadership and contingent reward behaviors were positively related with students' willingness to exert extra effort and student perception of instructor effectiveness.

Keywords: Instruction, Leadership, Training

Problem Statement

Human Resource Development (HRD) graduate instruction constitutes an important avenue for HRD professionals to attain the skills and competencies needed for successful professional practice. As such, graduate level instruction can be viewed as the preparation and training of future leaders in the field. Issues related to the process and quality of instruction and the characteristics of graduate faculty are, therefore, an important topic of research. Whereas research on the required skills and competencies of instructors and trainers is plentiful (e.g.: Leach & Sandall, 1995; Olson, 1994; Weischale, 1984), the instructional style of graduate HRD faculty has, so far, received little attention. Because graduates of HRD Master's and doctoral programs often advance into position of leadership in the profession, their training might be conceived within the framework of leadership education and development. The role of HRD faculty, in this context, expands from the exclusive focus on delivering content to one of modeling behavior, engaging students' affective identification with their future roles, and engendering a sense of pride and belonging to the profession.

These characteristics—role modeling, imbuing a sense of pride, and developing the ability to critically challenge assumption—are at the core of the notion of transformational leadership as developed by Bass (1985). While not leaders in the traditional sense, it is the premise of this study that HRD faculty teaching graduate level instruction might exhibit behaviors very similar to those of transformational leaders, and that such instructor behavior might affect the outcomes students experience during a course. The purpose of this study is, therefore, to examine whether or not HRD faculty exhibit transformational, transactional, and laissez-faire behaviors when conducting graduate level classes, and what outcomes might be related to such behaviors. The outcome of this study might point to new directions for the conduct of training and education in the university environment and, if found to apply elsewhere, in other training and development settings.

Theoretical Framework

The theoretical framework for this study is the Full Range Leadership (FRL) framework and instrumentation developed by Bass and Avolio (1995). FRL distinguishes among three groups of behaviors that leaders might exhibit: transformational, transactional, and laissez-faire. These do not occur as pure types, and no normative claim is made for the superiority of a given behavior. Many empirical studies, however, have indicated that transformational behavior is frequently associated with higher levels of employee satisfaction and willingness to exert extra effort to reach a given goal (Bass & Avolio, 1995). Further, there is a growing body of empirical literature that links transformational behaviors to organization-level results (e.g.: Shamir, 1998). In this study, this framework will be adapted to fit a university instruction setting. Borrowing from transformational leadership theory, the following dimensions of instructional styles will be investigated: charismatic, inspirationally motivating, intellectually stimulating, and considerate of individual needs. Transactional styles will be defined as either contingent reward or negative reinforcement. The third style, laissez-faire, is defined as a single dimension.

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Three instructional outcomes were investigated: students' willingness to exert extra effort to meet course objectives, students' perceptions of the instructor as effective, and students' levels of satisfaction with the instructor. The FRL framework and existing instrumentation were modified to reflect the instructional setting of this study.

Research Questions

The overall objective of this study was to examine the extent to which the Full Range Leadership (FRL) theory applies to graduate level HRD instruction settings. In particular, the following research questions were addressed:

1. Do instructors demonstrate transactional, transformational, and laissez-faire instructional styles?
2. How are the transactional, transformational, and laissez-faire dimensions correlated in graduate classroom situation?
3. How are the transactional, transformational, and laissez-faire styles associated with learner satisfaction, perception of instructor effectiveness, and learner willingness to put in extra effort?

Literature Review

Organizations throughout the world are experiencing a state of uncertainty and change. In the United States, the productivity of work organizations and changes in the demographics of the work force are major concerns (Goldstein, 1993). The shift in the economy from manufacturing to service orientation, the trend toward more highly technological, sophisticated systems, increased globalization, and high customer expectations are major concerns for most organizations today (Goldstein, 1993). To address these issues, training has not only been viewed as a positive prospect for new entrants and those already in the work place, it is seen as a feasible alternative for providing opportunities and skills required to increase performance and productivity (Goldstein, 1993). It is, therefore, not surprising that the issue of required skills and competencies of trainers has received an increasing attention in the field of HRD in recent years (Leach & Sandall, 1995; Olson, 1994).

Some researchers suggest that despite the need for up-to-date training methods—needed because of the rapid changes in the workplace created by new technology—educators in business and industry still use traditional methods of training (Stuckey & Berardinelli, 1990). To address this problem, researcher like Keith and Gresso (1997) have proposed the introduction of new innovative strategies to.

Transformational Leadership

Empirical studies on transformational leadership demonstrate that it has significant effects on followers' attitudes, commitment, satisfaction, and performance (Kirkpatrick & Locke, 1996; Lowe et al. 1996; Shamir et al. 1993). It is a key ingredient in gaining confidence and coping with stress among teams (Neumann, 1992). Burns (1978) used the term transformational leadership to refer to individuals who recognize the existing needs of potential followers, but go further and seek to satisfy higher needs to engage the full follower's full self in terms of Maslow's hierarchy of needs. Transformational leaders raise followers' levels of awareness of the importance of achieving valued outcomes, suggest strategies for reaching those outcomes, and encourage them to transcend their self-interests for the sake of the team, organization, or larger policy (Bass & Avolio, 1997).

Bass (1985) identified four components of transformational leadership: charisma, inspirational motivation, intellectual stimulation, and individualized consideration. Charisma is leader behavior that gains the respect, pride, trust and confidence of followers by transmitting a strong sense of vision and mission. Charismatic leaders are viewed as role models because of the personal sacrifices and their ability to competently remain calm in crises. Inspirationally motivating leaders behave in ways that motivate and inspire those around them by providing meaning and challenge to their followers' work. Such leaders creates a positive and cheerful environment for identifying conflicts and expected solutions (Bass, 1998). Leaders are intellectually stimulating to the extent that they challenge followers to be creative, think critically on their own, and encourage them to question old assumptions and find new ways of solving existing problems. Thus, followers are encouraged to seek a wide range options to reach desired results (Bass, 1998). Individualized consideration is concerned with developing followers by coaching and mentoring. Such leaders pays special attention to each individual's abilities, aspirations and needs to enhance followers' confidence in responding to problems facing them and their organizations.

Transactional Leadership

Transactional leadership is based on the idea that leader-follower relations are enhanced by a sequence of bargains between the leader and the follower (Den Hartog, Van Muijen, & Koopman, 1997). It emphasizes the exchange that takes place among followers and leaders. Bass identified three components of transactional leadership: (1) contingent reinforcement or contingent reward, (2) active management-by-exception, and (3) passive management-by-exception (Bass, 1985). The contingent reward component of transactional leadership is based on the assumption that reward is the overriding principle for effective performance. The follower's needs are identified and then linked to both what the leader wants to achieve and the rewards associated with the effort of the follower. Leaders who practice management-by-exception take action only when things go wrong and standards are not met. Active management-by-exception represents a style where leaders take an active role by continuously monitoring followers' performance to avoid any possible error that might emerge. Passive management-by-exception leadership is characteristic of leaders who intervene and take actions only after problems have occurred.

Laissez-faire Leadership

Laissez-faire or non-leadership is the third component of FRL. In laissez-faire leadership, there is complete absence of leadership. The leader is entirely not responsible for anything. Laissez-faire leaders avoid decision making and assuming responsibility. By definition, it is the most inactive and ineffective type of leadership according to most research studies (e.g.,: Bass, 1998).

Although research studies indicate that transformational leadership has stronger association with followers' satisfaction and performance, this does not imply transformational leadership is a substitute for transactional leadership. According to most research studies, transactional leadership provides an essential base from which transformational leadership extends its influence to broaden leader effectiveness (Loo, Kennedy, Dean, & Sauers, 1998).

Research Design and Methodology

The sample for this exploratory study consisted of graduate HRD students in four classes at a large Midwestern University. Overall enrollment was about 60 students. Consequently, four graduate level classes were selected, two small classes (6 - 10 students) and two larger classes (15 - 20 students). Sixty percent of the participants were female and 40 percent male. Students as well as the instructors were asked to complete written surveys.

Data was collected during the last three weeks of the semester after approval to conduct the study was obtained from the Human Subject Committee. The purpose of the study was explained to the participants, and it was stressed that the aim of the study was not to evaluate their instructors, but to seek their perception of the instructor's instructional styles. Students and faculty were asked to complete the questionnaires. Students' participants ranged in age from 21 to 54 years (M=31; SD=9.14). Forty percent of the students had bachelor's degrees in arts and science; 56 percent had master's degrees in the fields of arts, business administration, education or science. The students' full working years of experience ranged from zero to 33 years (M=6.91; SD=4.48). Most of the student participants came from the field of business administration, education and psychology. Tables 1 and 2 below show the descriptive statistics and frequency distribution for the demographic information of faculty and student participants.
A modified version of MLQ Form 5X (Bass & Avolio, 1995) was used in this study to identify the behaviors underlying the transactional, transformational and laissez-faire instructional behaviors. The MLQ has extensively been used in nearly over 200 field and laboratory research studies in numerous business and industrial firms, military organizations, governmental agencies, colleges, and secondary schools. The MLQ items were based on a 5-point scale (0=Not at all to 4=Frequently, if not always). There were two questionnaire forms: the self-rating form, where the instructors rated themselves and the rater form, where the students rate their instructors. The instructors were asked to complete the self-rating forms, while the students completed the rater form. The MLQ 5X (revised) had 45 items (36 leadership items and nine outcome items) in each form that identify and measured key leadership and effective behaviors. Transformational leadership style had 20 items (sample item: "My instructor treats me as an individual and not just as one of the class"), the transactional style had 12 items (sample item: "My instructor provides me with assistance in exchange of my effort"), and laissez-faire had four items (sample item: "My instructor avoids getting involved when important issues arise"). The key leadership outcome of extra effort had

three items (sample item: "My instructor heightens my desire to succeed"). Effectiveness had four items (sample item: "My instructor leads a class that is effective") and satisfaction had two items (sample item: "My instructor works with me in a satisfactory way").

Table 1
Demographic Information of Student Participants (N=53)

Descriptive	n	Mean	Min	Max	SD
Age		31	21	54	9.14
Working Experience		6.91	0	33	4.48
Degree					
Bachelor's	21	40%			
Master's	30	56%			
Advanced Certificate	1	2%			
Ph.D.	1	2%			
Gender					
Female	32	60%			
Male	21	40%			

Table 2
Demographic Information of the Faculty Age and Years of Full-Time Working Experiences (N=4)

Descriptive	n	Mean	Min	Max	SD
Age		40	30	44	6.68
Working Experience		16	10	21	4.69
Degree					
Ph.D.	4	100%			
Gender					
Female	1	25%			
Male	3	75%			

Although the MLQ has previously been used in institutions of higher learning certain terms were changed to suit this study. The term 'leader' was substituted with 'instructor'; 'others' in the self-rating form with 'students'; 'group' with 'class', and 'performance' goals with 'training' goals. These changes were necessary to minimize confusion that could arise in the use of such terms in an educational setting.

Data Analysis

The reliability and internal consistency of the MLQ 5X instruments were assessed by calculating Chronbach's alpha (α). According to literature (Nunnally, 1967), an α greater than .70 (α>.70) is acceptable. In this study, Cronbach's α and the average of inter-item correlations (phi-coefficient) were calculated for each of the 7 leadership scales and the three outcome variables. A general criterion of an α >.70 was adopted. Scales that did not meet this criterion were left out of subsequent analyses. Finally, the Pearson Correlation Coefficients between the six leadership scales and two outcome variables of the MLQ 5X were calculated.

Results

The scale statistics for the leadership scales and three outcome variables are reported in Table 3. Six leadership scales and two outcome variables recorded high reliability and internal consistency as calculated by alpha. The Laissez-faire leadership and satisfaction scales were excluded from the final analysis because they did not meet the general criterion of an α >.70.

Table 3 shows the MLQ 5X items and their means and standard deviations. These results are consistent with the previous studies (see for example, Bass & Avolio, 1997). The means for transformational scales ranged between

2.91 and 3.35 which implies that these behaviors were observed more often than transactional behaviors. This may further suggest that instructors are typically transformational. Similarly, the means for the two outcome variables (EE, EFF) were reasonably high, 3.14 and 3.34. Table 3 also shows the means, standard deviations and alpha for the transactional leadership, transformational leadership and laissez-faire leadership dimensions. The mean for the transformational scale was high (3.18), while the mean for the transactional scale was lower (1.65).

Table 3
Descriptive Statistics, Co-efficient and Reliability Scores for MLQ 5X for Students (N=53)

Scale	No of Items	Mean	SD	Alpha
Transformational	20	3.15	.62	.92
CL	8	2.91	.67	.77
IM	3	3.32	.71	.81
IS	4	3.35	.60	.70
IC	4	3.19	.82	.78
Transactional	11	1.65	.55	.70
CR	4	3.42	.62	.71
MBE	8	.93	.74	.81
Laissez-Faire	4	.41	.48	.18
EE	3	3.14	.80	.81
EFF	4	3.34	.71	.83
SAT	2	3.38	.75	.60

Note. ***Key***: CL = Charisma IM = Inspirational motivation IS = Intellectual stimulation
IC = Individual consideration CR = Contingent reward MBE = Management-by-exception
EE = Extra effort EFF = Effectiveness SAT = Satisfaction

Table 4 shows the correlation between transformational and transactional and the two outcome variables. The Intercorrelations among the four transformational leadership scales and the transactional scale were positive and significant. These results are consistent with previous investigations that indicate that leaders exhibit both transactional and transformational leadership (Bass & Avolio, 1995).

Table 4
Correlations Between MLQ 5X Leadership Scales and Outcome Variables

	Trans	CL	IM	IS	IC	Transact	CR	MBE	EE
Trans									
CL	.98**								
IM	.88**	.82**							
IS	.71**	.67**	.73**						
IC	.91**	.86**	.75**	.50**					
Transact	.31	.48*	.32	.30	.24				
CR	.85**	.68**	.62**	.51**	.81*	.16			
MBE	-.01	.24	.12	.07	-.05	.93**	.21		
EE	.52**	.50**	.51**	.35*	.57**	.13	.64**	.03	
EFF	.51**	.42*	.49**	.46**	.55**	-.07	.69**	-.31	.70**

*P < .05; **p < .01
Key: Trans = Transformational; CL = Charisma; IM = Inspirational motivation;
IS = Intellectual stimulation; IC = Individual consideration;
Transact = Transactional; CR = Contingent reward; MBE = Management-by-exception;
EE = Extra effort; EFF = Effectiveness; SAT = Satisfaction.

Consistent with previous studies (1990; Bass & Avolio, 1997; Bycio, et al. 1995), transformational leadership was positively correlated with the learner willingness to put in extra effort and perception of instructor effectiveness.

Consistent with previous investigations (Bass & Avolio, 1993; Bycio et al. 1995), Table 4 indicates a positive, although not significant correlation between the transactional leadership scale of contingent reward and extra effort.

Discussion

The purpose of this study was to examine to what extent the Full Range Leadership (FRL) theory applies in a training/instruction situation. The results of the study lend support to the previous investigations that have shown the ratings of leader effectiveness associated positively with transformational leadership and contingent rewards; and negatively to transactional scale of management-by-exception (Bycio et al. 1995; Lowe et al., 1996). However, these results could be attributed to a number of factors, including the class and overall sample size. Consequently, further investigations are needed to ascertain these results before any generalization.

Limitations

Some limitations of this study merit a basis for future research regarding the applicability of Full Range Leadership to an instructional environment before the conclusions can be generalized. First, the student participant in this study came from different majors (e.g., business administration, education and psychology). Perhaps, the results would be different if the study involved students from the same major or a particular department with similar interests. Second, large samples size result in statistically significant differences between the means and correlations coefficients that may be practically significant. In this study, the sample size was small, not reasonably enough to make generalization.

Conclusions and Contributions to HRD

This was an exploratory study aimed at determining whether or not Full Range Leadership applies to an instructional setting. Although the study can not be generalized beyond the participants studied, from a research perspective it is a good starting point to further explore the relationship between training and the components of Full Range Leadership. Specifically, this study lays the groundwork for further investigation of FRL behaviors in other education and training settings, such as management development programs, in business and industry; and with a more diverse population and in larger settings. We recommend a full scale study with a large number of participants, particularly outside the school environment to determine if similar results can be found. In terms of its contribution to theory and practice, this study has added to the debate on the universality of the new leadership paradigm (Bass, 1997). It also lays the groundwork for innovative practice in training and education and to more effective development of trainers and HRD professionals.

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2-Way Customer-Service Provider Cycle

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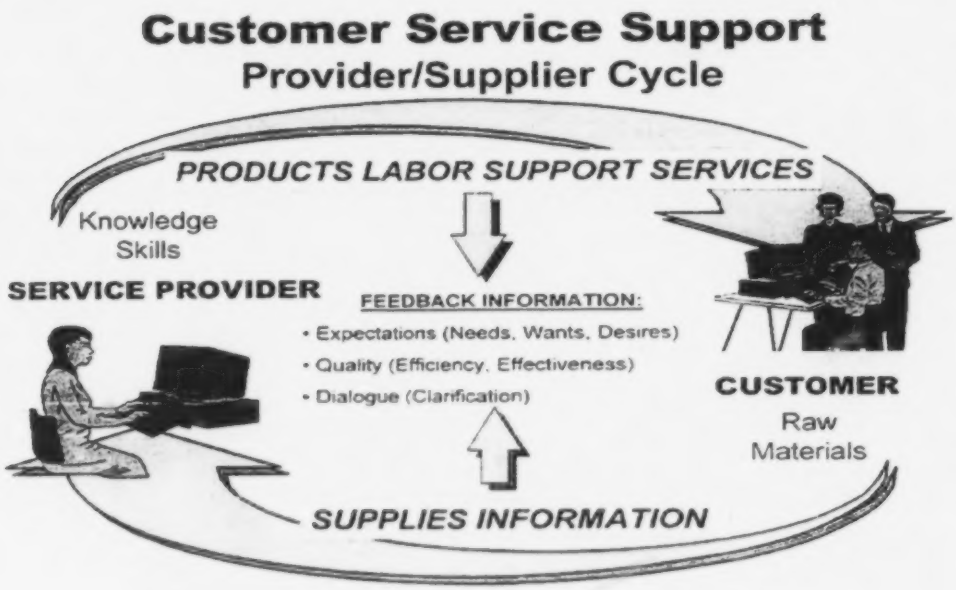

Presenters Discussion

There are paradoxes in communicating a customer service orientation. First, responsiveness to customers can be detrimental when their needs are met beyond reasonable expectations. Second, who customers are can change depending on who is providing information, materials, services or products at a particular time. However, without satisfactory, ongoing dialogue and feedback throughout the service process, there are not likely to be "repeat" customers.

To provide a product or service to a customer, the customer's input is required. Importantly, this input needs to be solicited by the provider and given by the customer in a clear, complete, unambiguous and timely way. When this input on the part of both client and service provider falls short, then the result is often problematic.
This interactive model depicts responsibilities and transactions between the customer and service provider that must be communicated if optimal satisfaction is to occur. In this relationship, each party serves two interchangeable roles--sender and receiver of verbal and non-verbal information--but not necessarily at the same time.

A customer serves as a supplier when providing raw material to a contractor. A contractor serves as a recipient-customer specifying the requirements of the raw material and judging its quality; a contractor's work depends on communicating those factors.

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Theoretical Base of the Model

Contemporary research into dialogue has taken a path through the human sciences (sociology, anthropology, communication, and psychology) as well as the physical sciences.

Martin Buber (1997), philosopher, described "dialogue" in 1914 as an interactive exchange between human beings who really listened to and mutually valued what each had to say to the other.

In 1957, Carl Rogers, psychologist--originator of "active listening"--held a dialogue with Buber where the back and forth conversation revealed a new self-awareness on the part of the participants, opening up new perceptions and shared meanings (1997).

David Bohm (1985), physicist, has contributed to a new way of understanding social organization and the workings of the human mind. Bohm believed our perceptions, meanings and communication are enfolded, one thought within another, so reality is never complete. Through dialogue, Bohm suggested that perceptions, assumptions, and "undiscussables" can be surfaced and clarified in a non-confrontational way. In an individual or group setting, Bohm believed a *collective mindfulness* could be maintained.

Kurt Lewin (Schein & Bennis, 1965) first used the word "feedback" in the late 1940s to underscore the necessity of feeding back the message to the sender so that the message could be adjusted or changed. Feedback influences decision making, problem solving, and information transmission; it creates energy and monitors automatic blaming. Chris Argyris (1985, 1993) described destructive attributions, defensive routines (model #1 theory-in-use) and the use of testing inferences (model #2 theory-in-use) for overcoming barriers to change in organizations.

This theoretical base and model is important to HRD in that it focuses on the breakdowns and problems between individuals and department teams that often take place during the internal customer service process. These problems in organizational communication reflect (a) ineffective (e.g., incomplete, inaccurate, unclear) human communication, and (b) conflicts and confrontations inherent in how differently people think and perceive "truth" in organizations. This model would inform decisions related to organizational development, training and interpersonal skills.

Poster Exhibition

This 2-way supply cycle model illustrates that the characteristics of a finished product depend largely on the tangible raw materials and the intangible issues affecting the two-way relationship. Some of these relational issues central to this model are the following:

- needs / wants
- expectations
- quality
- timeliness
- cost
- requirements
- discrepancies
- feedback

Customer-Contractor Transactions: A Dialogue Between T&D and Publications

Sally Turner has been in the publishing and printing business for 25 years. Respected as a no-nonsense, assertive, department head, Sally is known as a manager who communicates honestly. She catches up with Bill as he turns the corner mumbling to himself.

"Bill, what's happening?"

"Nothing much; that's the problem. I was counting on getting new configured PCs with our training video and course registration software. Now, it looks like it will be much later before its up and running for our use. The training center has been empty for the past two months waiting for the PCs and software. New employees and many other employees are waiting for training here and in the field."

"I can't promise when Information Systems (IS) will deliver. But I can promise my editors will work on your video and registration materials as soon as possible, Bill."

"What do you mean by *as soon as possible*, Sally?"

"I mean, as soon as we get your drafts, once the IS people have edited these materials, we can work with them to set up the catalogue like we always do."

Bill takes a deep breath: "I appreciate your willingness to listen to me and help me get this done sooner rather than later. Also, thanks for letting us make last minute changes last time."

"Glad you brought that up, Bill. Last minute changes are costly ones to make. So, we ask that you follow our procedures. Because the final binding and printing go outside, any last minute changes after the blueline is approved is an expensive proposition. You were out of town when your assistant asked to add two pages of programs. My department ate the supplier's extra costs. When that happens, we go over budget and eat into our profits from external sales which pay for services to internal customers like you. Can we count on the training department to follow the procedures outlined in the publications brochure?"

Dialoguing, as this example demonstrates, is a collaborative process where both parties share their meaning and inquire about their individual perceptions. This process helps to ensure that the transaction will be civil, non-confrontational and supportive of getting everyone's needs met.

Posted Guidelines

Here are some guidelines to support the customer-supplier provider partnership.

- Maintain a dialogue to build trust and openness; ask questions, suspend judgement
- Listen effectively to improve mutual understanding; share information, questions and concerns
- Work jointly to set goals, establish boundaries and plan action steps
- Streamline the time it takes to deliver services and material through action teams
- For the teams, select key people who are accountable for maintaining product and service quality
- Publish procedures so that suppliers and other parties can commit to achieving quality checkpoints
- Monitor changes to the customer service process, people, and tasks so you can make the necessary adjustments
- Use quality assurance and measurement control to attain and maintain standards
- Apply two-way feedback each step along the way

Clearly, customer service, especially among departments in organizations, has to be a two-way approach to be beneficial for both customer and service provider.

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Using Art to Explore a Metaphor for the Training Process

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The poster offers the visual metaphor of the transition of ice to water to steam for the potential effects of the training process on individuals. Conference attendees are invited to interpret the work, contrast the metaphor with their own, and comment in the journal attached to the easel. This short paper is a summary justification of the poster using references from the fields of HRD, adult education, and art.

Metaphor in Art and HRD

In non-visual forms, metaphors offer highly graphic mental pictures that enable the transformation of words from a context in which their use is literal to a context in which they provide an analogy (Palmer & Dunford, 1996). Metaphors therefore have the potential to make the complex simple, aid understanding, and provide ways of seeing and thinking, for example about organizations (Morgan, 1986). They are therefore a powerful tool for aiding and extending the understanding of a complex issue. Within organizations, metaphors promote communication of complex phenomena through creative symbolism (Brink, 1993). In many cases, art provides the source of those metaphors, and Palmer and Dunford (1996) referred to fifteen articles where metaphorical insights into either the practice or the teaching of management had been drawn from the arts, including from storytelling and literature, music, film, drama/theater, and art. Art in-turn also has a strong historical association with metaphor (Ades, 1994).

Building on the historical role of metaphor in both art and organizational issues, and the links between the two, the poster provides a visual representation of a proposed new metaphor appropriate to HRD. That metaphor focuses on the potential effects of the training process and is offered to promote discussion of its suitability and utility, and to provide new ways of seeing.

Ice, Water, and Steam

The journey metaphor is one of the most common, if not one of the central metaphors of Western culture, and is often used in an organizational context (Lackoff & Johnson, 1980). The metaphorical journey of the training process is portrayed in the poster using photographic transitional images of ice, water, and steam.

The pre-training or early-training individual is portrayed by a cube of ice. Cubes are a frequent metaphor in art and have been used to convey: the monotony of modular-determined units, the very opposite of freedom, and the equality of parts (Gablik, 1994); plasticity and lacking free-flowing (Green, 1994); and the suppression of the intimacy of detail (Fineberg, 1995).

Ice, or at least the concept of freezing, can be found in both adult education and HRD literature. Sugarman (cited in Merriam & Caffarella, 1991) described seven stages that accompany a wide range of transitions in adult education, the first being immobilization or a sense of being overwhelmed or frozen; Lewin also used freezing in his three stages of learning (described in Rothwell, Sullivan, & McLean, 1995).

Artistically, everyday objects are often used to reduce an artwork's appeal to strong emotions by reducing the association to the human figure (Green, 1994). Similarly, mass-produced goods are used by some artists to emphasize functionality rather than individuality (Lucie-Smith, 1994). Ice can be said to fall within both categories.

Combining the metaphorical properties of cubes and ice marries the monotony and suppression of the cube with the reduced emotion and hidden individuality of the ice. That combining produces an object indistinguishable from others of its kind and valued only for the function it performs. The symbolism is of a non-humanistic view of the pre-training individual who lacks freedom, has suppressed individuality, whose true potential has not yet been realized, and who is valued for the function performed.

The change of state from ice to liquid to steam symbolizes the transition of an individual through the training process. That change is depicted through a three dimensional poster – the third dimension being time (a similar argument to the fourth dimension used by constructivist sculptors - Barrett, 1994). Art has made little

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metaphorical use of steam, and so its use in the poster is not grounded in past works. Nevertheless, steam does have properties that make its use appropriate in the proposed metaphor and poster. Steam differs from ice in many respects, and water is a mid-point on the journey. Those differences include: the position of steam as the realized potential of both ice and water - steam is at a higher 'state' of being; steam's greater freedom and reduced restriction compared with the fixed position of ice or a container of water; steam's potential for impact over a far greater area and for impact on a greater number of people; steam's potential as a power-source; and steam's propensity to rise up whereas water and ice both fall (although not for ice in water).

The metaphor also raises deeper issues for discussion, such as: how to retain steam in its higher state; how to renew water to produce more steam; how to harness the potential of steam; how to renew the heat source; the importance of the energy required to heat the ice and water; and so on.

Of course, like all metaphors, this one is not perfect. As Palmer and Dunford (1996) stated, "it is important to recognize that any metaphor can only provide a partial insight. Two situations cannot be perfectly analogous without becoming one and the same, therefore understanding a situation via a transferred image must always be less than comprehensive" (pp. 8-9). In the case of the proposed metaphor, other properties of ice, water, and steam exist which would not fit comfortably with a description of the effects of training, for example steam tends to just disappear and it is usually more desirable to keep water in its existing state than to take it to its higher state. Nevertheless, similar problems exist with most metaphors, but their utility stems from their ability to open up new ways of seeing old situations (Lackoff & Johnson, 1980). The test for the proposed metaphor is whether or not it triggers such new ways of seeing.

Justification for the Presentation Style

The poster provides little detail other than of the main object. As Matisse stated, "all that is not useful in the picture is detrimental... for superfluous details would in the mind of the beholder, encroach upon the essential elements" (cited in Whitfield, 1994, p.24). The limited detail forces the viewer's focus away from the process, the heat source, to concentrate instead on the consequences of the process. For the same reasons, color is an unnecessary distraction from the process effects (and therefore follows on from some of the justifications used for the monochrome landscapes of Braque or paintings of Kline or de Kooning).

The use of photographs rather than painting or drawing reflects the increasing use of photography in art (Wolf, 1989) and the view of camerawork as not only reflecting the truth but also, by alterations or inaccurate reporting, as having the potential to report what else things are or might be (White, 1989). The photograph as art has the special attraction of combining the visual rhetoric of the picture with the actuality of the photograph (Weaver, 1989). The poster is therefore in-line with the artistic use of photography, seeks to show what might be as well as what is, and seeks to combine the reality of the photograph with the alternatives offered by visual metaphor.

Finally, in using the transition between natural states, the photographer has relinquished control of the work, letting the changing object determine the form of the art, as in the work of Huebler and Dibbet (Smith, 1994). The influence of natural laws on the training process is implied.

Questions for Conference Attendees

At the conference, a second poster will be used to prompt attendees to reflect on the one described in this paper. It will contain key words and questions, and attendees will be invited to comment on the posters in an attached journal. The three main prompting questions will be:

- How does the proposed metaphor provide you with new ways of seeing the effects of the training process?
- What do you gain from using the proposed metaphor?
- What other training process metaphors are you willing to share with the AHRD community?

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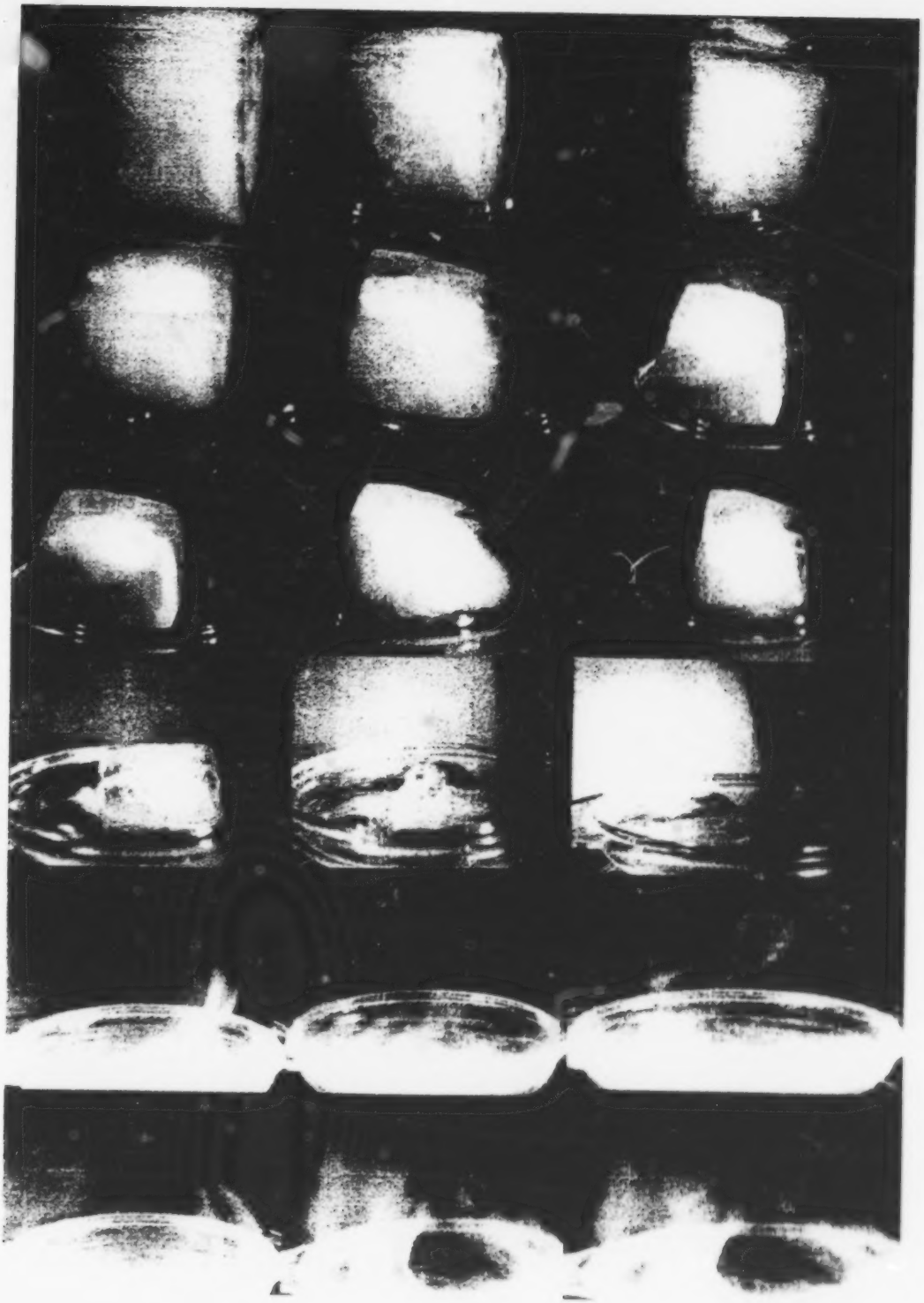

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Standards on Ethics and Integrity

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ACADEMY OF HUMAN RESOURCE DEVELOPMENT

Standards on Ethics and Integrity

PREFACE [1]

Human Resource Development (HRD) as a profession is an interdisciplinary field. It is focused on systematic training and development, career development, and organization development to improve processes and enhance the learning and performance of individuals, organizations, communities, and society.

An HRD professional is an individual engaged in HRD-related practice, research, consulting, and instruction/facilitation/teaching. As HRD professionals, members of the Academy of Human Resource Development (AHRD) strive to create a body of research-based knowledge. They apply that knowledge to human resource development in various organizational, community, and societal settings while functioning as professors, researchers, consultants, administrators, analysts, trainers, performance improvement technicians, and other practitioners.

A central goal of AHRD professionals practicing in the arenas of training and development, organizational development, and career development is to broaden understanding of the complex activities involved in assisting individuals or organizations to improve their ability to develop themselves.

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[1] Ethical statements and/or standards from several organizations were reviewed during the development of these Standards on Ethics and Integrity for the Academy of Human Resource Development. These organizations are the American Educational Research Association, American Evaluation Association, American Management Association, American Psychological Association, Society of Human Resource Management, and the Organization and Human Systems Development (OD-HSD) group.

PURPOSE

The purpose of these Standards on Ethics and Integrity for the Academy of Human Resource Development is to provide guidance for HRD professionals engaged in practice, research, consulting, and instruction/facilitation/teaching. Although these principles are aspirational in nature, they provide standards of conduct and set forth a common set of values for HRD professionals. Adherence to these standards builds ethical, professional, and research accomplishments for HRD professionals and adds to the further definition and clarification of HRD as a profession. The primary goal of these standards is to define more clearly a holistic balance among individuals, groups, organizations, communities, and societies whenever conflicting needs arise.

To ensure this balance, these Standards identify a common set of values upon which HRD professionals build their professional and research work. In addition, the Standards clarify both the general principles and the decision rules that cover most situations encountered by HRD professionals. The Standards have as their primary goal the welfare and protection of the individuals, groups, and organizations with whom HRD professionals work.

Adherence to a dynamic set of Standards for a professional's work-related conduct requires a personal commitment to the lifelong effort to act ethically; to encourage ethical behavior by students, supervisors, employees, and colleagues as appropriate; and to consult with others, as needed, concerning ethical problems. It is the individual responsibility of each professional to aspire to the highest possible standards of conduct. Such professionals respect and protect human and civil rights and do not knowingly participate in or condone unfair discriminatory practices.

In providing both the universal principles and limited decision rules to cover many situations encountered by HRD professionals, this document is intended to be generic and is not intended to be a comprehensive, problem-solving, or procedural document. Specific statements and solutions for special HRD-related situations will emerge from the development of case studies appended to this Standard. Each professional's personal experience as well as his or her individual and cultural values should be used to interpret, apply, and supplement the principles and rules set forth in these pages.

GENERAL PRINCIPLES

A. Competence

HRD professionals strive to maintain high standards of competence in their work. They recognize the boundaries of their particular competencies and the limitations of their expertise. They provide only those services and use only those techniques for which they are qualified by education, training, or experience.

Professionals realize that the competencies required when working with various groups and organizations differ. In those areas in which recognized professional standards do not yet exist, HRD professionals exercise careful judgment and take appropriate precautions to protect the welfare of those with whom they work. They maintain knowledge of relevant research and professional information related to the services they render, and they recognize the need for ongoing education. They use appropriate research and professional, technical, and administrative resources.

B. Integrity

HRD professionals seek to promote integrity in their research, teaching, and practice. They are honest, fair, and respectful of others. In describing or reporting their qualifications, services, products, fees, research, or teaching, they do not make statements that are false, misleading, or deceptive. They strive to be aware of their own belief systems, values, needs, and limitations and the effect of these on their work. To the extent feasible, they attempt to clarify for relevant parties the roles they are performing and to function appropriately in accordance with those roles. They avoid potentially conflicting relationships.

C. Professional Responsibility

HRD professionals uphold professional standards of conduct, clarify their professional roles and obligations, accept appropriate responsibility for their behavior, and adapt their methods to the needs of different populations. They consult with, refer to, or cooperate with other professionals and institutions to the extent needed to serve the best interests of their clients.

Their moral standards and conduct are personal matters to the same degree as is true for any other person, except as their conduct may compromise their professional responsibilities or reduce the public's trust in their profession. They are concerned about the ethical compliance of the professional conduct and research of their colleagues. When appropriate, they consult with colleagues in order to prevent or avoid unethical conduct.

D. Respect for People's Rights and Dignity

HRD professionals accord appropriate respect to the fundamental rights, dignity, and worth of all people. They respect the rights of individuals to privacy, confidentiality, self-determination, and autonomy, mindful that legal and other obligations may lead to inconsistency and conflict with the exercise of these rights. They are aware of cultural, individual, and role differences, including those due to age, gender, race, ethnicity, national origin, religion, sexual orientation, disability, language, and socioeconomic status. They try to eliminate the effect on their work of biases based on those factors, and they do not knowingly participate in or condone unfair discriminatory practices.

E. Concern for Others' Welfare

HRD professionals seek to contribute to the welfare of those with whom they interact professionally. In their professional actions, they weigh the welfare and rights of their clients. When conflicts occur among professionals' obligations or concerns, they attempt to resolve these conflicts and to perform their roles in a responsible fashion that avoids or minimizes harm. They are sensitive to real and ascribed differences in power between themselves and others, and they do not exploit or mislead other people during or following their professional relationships.

F. Social Responsibility

HRD professionals are aware of their professional responsibilities to the community, the society in which they work and live, and the planet. They work to minimize adverse affects on individuals, groups, organizations, societies, and the environment. They understand that a healthy economy, healthy organizations, and a healthy ecosystem are intricately interconnected. They apply and make public their knowledge of learning and performance in order to contribute to human welfare. They are concerned about and work to mitigate the causes of human suffering.

When undertaking research, they strive to advance human welfare, human development, and a sustainable future. They try to avoid misuse of their work. They comply with the law and encourage the development of laws and social policy that serve the interests of their clients, the public, society, and the environment. They are encouraged to contribute a portion of their professional time to enhance societal, organizational, human, and environmental development for little or no personal gain or advantage.

STANDARDS

1. GENERAL STANDARDS

These General Standards apply to the professional and research activities of HRD professionals.

Boundaries of Competence	a. HRD professionals provide services, teach, and conduct research only within the boundaries of their competence, based on their education, training, supervised experience, or appropriate professional experience. b. HRD professionals provide services, teach, or conduct research involving new areas or new techniques only after first undertaking appropriate study, training, supervision, and/or consultation with persons who are competent in those areas or techniques. c. In those emerging areas in which generally recognized standards for preparatory training do not yet exist, HRD professionals nevertheless take reasonable steps to ensure the competence of their work and to protect clients, students, research participants, and others from harm.
Maintenance of Expertise	HRD professionals maintain a reasonable level of awareness of current research and professional information in their fields of activity and undertake ongoing efforts to maintain competence in the skills they use.
Basis for Research and Professional Judgments	HRD professionals rely on research and professionally derived knowledge when making research or professional judgments or when engaging in scholarly or professional endeavors.
Description of HRD Professionals' Work	a. When HRD professionals provide services to an individual, a group, or an organization, they make available appropriate information beforehand about the nature of such services and, later, appropriate information on results and conclusions. b. If HRD professionals will be precluded by law or by organizational roles from providing such information to particular individuals or groups, they so inform those individuals or groups at the outset of the service.

Respecting Others	a. Where differences of age, gender, race, ethnicity, national origin, religion, sexual orientation, disability, language, or socioeconomic status significantly affect the work of HRD professionals as related to particular individuals or groups, HRD professionals obtain the training, experience, consultation, or supervision necessary to ensure the competence of their services, or they make appropriate referrals. b. In their work-related activities, HRD professionals respect the rights of others to hold values, attitudes, and opinions that differ from their own.
Nondiscrimination	In their work-related activities, HRD professionals do not engage in unfair discrimination based on age, gender, race, ethnicity, national origin, religion, sexual orientation, disability, socioeconomic status, or any basis proscribed by law.
Exploitative Relationships	a. HRD professionals do not exploit persons over whom they have supervisory, evaluative, or other authority such as students, supervisees, employees, research participants, and clients. b. HRD professionals do not engage in sexual relationships with students or supervisees in training over whom the HRD professional has evaluative or direct authority, because such relationships are too likely to impair judgment or to be exploitative. c. HRD professionals do not engage in sexual harassment. d. HRD professionals accord sexual-harassment complainants and respondents dignity and respect. e. HRD professionals do not knowingly engage in behavior that, based on factors such as a person's age, gender, race, ethnicity, national origin, religion, sexual orientation, disability, language, or socioeconomic status, is harassing or demeaning to the persons with whom they interact in their work.
Misuse of HRD Professionals' Work	If HRD professionals learn of misuse or misrepresentation of their work, they take reasonable steps to correct or minimize the misuse or misrepresentation.

Multiple Relationships

a. In many communities and situations, it may not be reasonable or feasible for HRD professionals to avoid social or other nonprofessional contacts with persons such as clients, students, supervisees, or research participants. They must always be sensitive to the potential harmful effects of such contacts on their work and on those persons with whom they deal. An HRD professional refrains from entering into or promising a personal, research, professional, financial, or other relationship with such persons in the following situations: (1) when the relationship might impair the HRD professional's objectivity; (2) when it might interfere with the effective performance of his or her function; or (3) when it might harm or exploit the other party.

b. Likewise, whenever feasible, an HRD professional refrains from taking on professional or research obligations when preexisting relationships would create a risk of such harm.

Consultations and Referrals

a. With appropriate consent and subject to other relevant considerations, including applicable law and contractual obligations, HRD professionals arrange for appropriate consultations and referrals based principally on the best interests of their clients.

b. When appropriate, HRD professionals cooperate with other professionals in order to serve their clients effectively and appropriately.

c. The referral practices of HRD professionals are consistent with the law.

Third Party Request for Services

a. When agreeing to provide services to a person or entity at the request of a third party, the HRD professional, at the outset of the service, clarifies to the extent feasible the nature of the relationship with each party. This clarification includes the professional's role (such as organizational consultant, trainer, or evaluator), the probable uses of the services provided or the information obtained, and the fact that there may be limits to confidentiality.

b. If there is a foreseeable risk of being called upon to perform conflicting roles because of the involvement of a third party, the HRD professional clarifies the nature and direction of his or her responsibilities, keeps all parties appropriately informed as matters develop, and resolves the situation in accordance with these Standards.

Delegation to and Supervision of Subordinates

a. HRD professionals delegate to their employees, supervisees, and research assistants only those responsibilities that such persons can reasonably be expected to perform competently on the basis of their education, training, or experience, either independently or with appropriately provided supervision.

b. HRD professionals provide proper training and supervision to their employees or supervisees and take reasonable steps to see that such persons perform services responsibly, competently, and ethically.

c. If institutional policies, procedures, or practices prevent fulfillment of this obligation, HRD professionals attempt to modify their role or to correct the situation to the extent feasible.

Documentation of Professional and Research Work

a. HRD professionals appropriately document their professional and research work in order to facilitate the provision of services later by them or by other professionals, to ensure accountability, and to meet other requirements of institutions or the law.

b. When HRD professionals have reason to believe that records of their professional services will be used in legal proceedings involving recipients of or participants in their work, they have a responsibility to create and maintain documentation in the kind of detail and quality that would be consistent with reasonable scrutiny in an adjudicative forum.

Records and Data

HRD professionals create, maintain, disseminate, store, retain, and dispose of records and data relating to their research, practice, and other work in accordance with the law and in a manner that permits compliance with the requirements of these Standards.

Fees and Financial Arrangements

a. As early as is feasible in a professional or research relationship, the HRD professional and the client reach an agreement specifying the compensation and the billing arrangements.

b. HRD professionals do not exploit recipients of services or payers with respect to fees.

c. HRD professionals' fee practices are consistent with the law.

d. HRD professionals do not misrepresent their fees.

Accuracy in Reports to Payers and Funding Sources

In their reports to payers for services or to sources of research funding, HRD professionals accurately state the nature of the research or service provided, the fees or charges, and, where applicable, the identity of the provider and the findings.

Referrals and Fees

When an HRD professional pays, receives payment from, or divides fees with another professional other than in an employer-employee relationship, the payment to each is based on the services (consultative, administrative, or other) provided and is not based on the referral itself.

2. RESEARCH AND EVALUATION

Research and Evaluation in a Professional Context

a. HRD professionals warrant their research and evaluation conclusions adequately in a way consistent with the standards of their own theoretical and methodological perspectives.

b. HRD professionals' reports and statements are based on information and techniques that are sufficient to provide appropriate substantiation for their findings.

c. HRD professionals design, conduct, and report research and evaluation in accordance with recognized standards of research competence and ethics. They keep themselves well informed in both their own and competing paradigms, where those paradigms are relevant to their research, and they continually evaluate the criteria of adequacy by which research is judged.

d. HRD professionals plan their research to minimize the possibility of misleading results.

e. HRD professionals consult with institutional review boards and use committees, peer consultations, and other avenues to consider the ethical acceptability of their research.

f. HRD professionals take reasonable steps to protect the rights and welfare of human subjects and other persons affected by the research.

Data Collection

a. HRD professionals who develop and conduct research with tests and other assessment techniques use research procedures and current professional knowledge for test and research design, standardization, validation, reduction or elimination of bias, and recommendations for use.

b. HRD professionals attempt to identify situations in which particular assessment techniques or norms may be applicable or may require adjustment in administration or interpretation because of factors such as individuals' gender, age, race, ethnicity, national origin, religion, sexual orientation, disability, language, or socioeconomic status.

c. HRD professionals are careful to interfere with the participants or milieu from which data are collected only in a manner that is warranted by an appropriate research design and that is consistent with research investigation.

Responsibility	a. HRD professionals conduct research competently and with due concern for the dignity and welfare of the participants. b. Researchers and assistants are permitted to perform only those tasks for which they are trained and prepared. c. HRD professionals consult those with expertise concerning any diverse population under investigation or that is most likely to be affected.
Compliance with Law and Standards	HRD professionals plan and conduct research in a manner consistent with federal and state laws and regulations, as well as with professional standards governing the conduct of research, particularly those standards governing research with human subjects.
Institutional Approval	HRD professionals obtain from host institutions or organizations appropriate approval prior to conducting research, and they provide accurate information about their research proposals. They conduct the research in accordance with the approved research protocol.
Informed Consent	a. When obtaining research participants' informed consent, HRD professionals use language that is reasonably understandable to the participants, and professionals then document the informed consent. b. HRD professionals inform participants of the nature of the research; they inform participants that they are free to participate or to decline to participate or to withdraw from research; they explain the foreseeable consequences of declining or withdrawing; they inform participants of significant factors that may be expected to influence their willingness to participate (such as risks, discomfort, adverse effects, or limitations on confidentiality). c. When HRD professionals conduct research with students or subordinates, they take special care to protect the prospective participants from adverse consequences of declining or withdrawing from participation. d. When research participation is an educational course requirement or an opportunity for extra credit, the prospective participant is given the choice of equitable alternative activities. e. HRD professionals obtain informed consent from research participants prior to filming or recording them in any form, unless the research involves simply naturalistic observations in public places and it is not anticipated that the recording will be used in a manner that could cause personal identification or harm. f. HRD professionals inform research participants of any anticipated sharing or further use of personally identifiable research data and of the possibility of unanticipated future uses.

g. HRD professionals provide a prompt opportunity for participants to obtain information about the nature, results, and conclusions of the research and attempt to correct any misconceptions that participants may have.

h. HRD professionals take reasonable measures to honor all commitments they have made to research participants.

Incentives to Participants

a. When offering professional services as an inducement to obtain research participants, HRD professionals make clear the nature of the services as well as the risks, obligations, and limitations.

b. HRD professionals do not coerce participation in research projects by offering excessive or inappropriate inducements.

Deception in Research

a. HRD professionals do not conduct a study involving deceptions unless they have determined that the use of deceptive techniques is justified by the study's prospective research, educational, or applied value and that equally effective alternative procedures (without deception) are not feasible.

b. HRD professionals never deceive research participants about significant aspects that would affect their willingness to participate, such as unpleasant emotional experiences, discomfort, or physical risk.

c. Any other deception that is an integral feature of the design and conduct of an experiment must be explained to participants as early as feasible, preferably at the conclusion of their participation, but no later than the conclusion of the research.

Interpretation and Explanation of Research and Evaluation Results

a. When interpreting research and evaluation results, including computer-generated results, HRD professionals take into account the factors that reduce the accuracy of interpretations. They indicate any significant reservations they have about the accuracy or limitation of their interpretations.

b. Unless the nature of the relationship is clearly explained in advance to the person being assessed and precludes an explanation of results (as in some organizational consulting or pre-employment screening), HRD professionals ensure that an explanation of the results is provided in language that is reasonably understandable to the person assessed. Regardless of whether the scoring and interpretation are done by the professional, by assistants, or by automated or other outside services, professionals take reasonable steps to ensure that an appropriate explanation of results is given.

c. HRD professionals retain responsibility for the appropriate application, interpretation, and use of instruments, whether they score and interpret such tests themselves or use automated or other services.

d. HRD professionals do not make recommendations based on data that is outdated or obsolete for the current purpose.

3. Advertising and Other Public Statements

Definition of Public Statements

HRD professionals comply with these Standards in public statements relating to their professional services, products, or publications or to the field of human resource development. Public statements include, but are not limited to, paid or unpaid advertising, brochures, printed matter, directory listings, personal resumes or curricula vitae, interviews or comments for use in media, communications via computer technology, statements in legal proceedings, lectures and public oral presentations, and published materials.

Statements by Others

a. An HRD professional who engages others to create or place public statements that promote his or her professional practice, products, or services retains professional responsibility for such statements.

b. In addition, HRD professionals make reasonable efforts to prevent others whom they do not control (such as publishers, sponsors, organizational clients, and representatives of the print or broadcast media) from making deceptive statements concerning human resource development practice or professional activities.

c. If HRD professionals learn that deceptive statements about their work have been made by others, HRD professionals make reasonable efforts to correct such statements.

d. HRD professionals do not compensate employees of press, radio, television, or other communication media in return for publicity in a news item.

e. A paid advertisement related to the HRD professional's activities must be identified as such, unless that is already apparent from the context.

Avoidance of False or Deceptive Statements

HRD professionals claim as credentials for their work only those degrees that were earned from an accredited educational institution.

Media Presentations

When HRD professionals provide advice or comment by means of public lectures, demonstrations, radio or television programs, prerecorded tapes, printed articles, mailed material, or other media, they take reasonable precautions to ensure that (1) the statements are based on appropriate human resource development literature and practice, (2) the statements are otherwise consistent with these Standards, and (3) the recipients of the information are not encouraged to infer that a relationship has been established with them personally.

4. PUBLICATION OF WORK

Reporting of Research and Evaluation Results	a. HRD professionals do not fabricate data or falsify results in their publications. b. If HRD professionals discover significant errors in their published data, they take reasonable steps to correct such errors with a correction, retraction, erratum, or other appropriate publication means.
Plagiarism	HRD professionals do not present substantial portions or elements of another's work or data as their own, even if the other work or data source is cited occasionally.
Publication Credit	a. HRD professionals take responsibility and credit, including authorship credit, only for work they have actually performed or to which they have contributed. b. Principal authorship and other publication credits accurately reflect the relative professional contributions of the individuals involved, regardless of their relative status. For example, mere possession of an institutional position, such as department chair, does not necessarily justify authorship credit. Minor contributions to research or to writings for publication are appropriately acknowledged in footnotes, for instance, or in an introductory statement. c. A student is usually listed as the principal author on any multiple-authored article that is substantially based on the student's dissertation or thesis.
Duplicate Publication of Data	HRD professionals do not publish as original work those articles that have been previously published. This does not preclude republishing work accompanied by proper acknowledgment.
Release of Data	After research or evaluation results are published, HRD professionals do not withhold the data on which their conclusions are based from other competent professionals who seek to verify the substantive claims through re-analysis and who intend to use such data only for that purpose, provided that the confidentiality of the participants can be protected and that no legal rights concerning proprietary data preclude such release.
Professional Reviewers	When reviewing material submitted for publication, provided for grants, or included in other research and evaluation proposals, HRD professionals who recognize the author(s) of that work respect the confidentiality of these author(s) and their proprietary rights.

Ownership of Intellectual Property

While ideas and other intellectual products may, under suitable circumstances, be viewed as commodities, any arrangements made concerning the production or distribution of ideas or other intellectual products must be consistent with academic freedom and the appropriate availability of intellectual products to scholars, students, and the public. Moreover, when a conflict between the academic and scholarly purposes of intellectual production and the profit from such production arise, preference should be given to the academic and scholarly purposes. Ownership of intellectual products should be based upon the following guidelines:

a. Individuals are entitled to profit from the sale or disposition of those intellectual products they create. They may, therefore, enter into contracts or other arrangements for the publication or disposition of intellectual products and may profit financially from the arrangements.

b. Arrangements for the publication or disposition of intellectual products should be consistent with appropriate public availability and with academic freedom. Such arrangements should emphasize the academic functions of publication over the maximization of profit.

c. Individuals or groups who fund or otherwise provide resources for the development of intellectual products are entitled to assert claims to a fair share of the royalties or other profits from the sale or disposition of those products. Because such claims are likely to be contentious, funding institutions and authors should agree on policies for the disposition of profits at the outset of the research or development project.

d. Authors should not use positions of authority over other individuals to compel them to purchase an intellectual product from which the authors benefit. This standard is not meant to prohibit use of an author's own textbook in a class, but copies should be made available on library reserve or otherwise available so that students are not forced to purchase the book.

5. PRIVACY AND CONFIDENTIALITY

Discussions of the Limits of Confidentiality

a. Permission for electronic recording of interviews is secured from clients.

b. HRD professionals discuss with persons and organizations with whom they establish a professional relationship (1) the relevant limitations on confidentiality, including limitations, where applicable, in organizational consulting, and (2) the foreseeable uses of the information generated through their services.

c. Unless it is not feasible or is contra-indicated, the discussion of confidentiality occurs at the outset of the relationship and thereafter as new circumstances may warrant.

Protection of Confidentiality

a. HRD professionals have a primary obligation and take reasonable precautions to respect the confidentiality rights of those with whom they work or consult, recognizing that confidentiality may be established by law, institutional rules, or professional relationships.

b. In order to minimize intrusions on privacy, HRD professionals include in written and oral reports, consultations, and the like only that information germane to the purpose for which the communication is made.

c. HRD professionals discuss confidential information obtained in consulting relationships or evaluative data concerning clients or students only for appropriate professional purposes and only with persons clearly concerned with such matters.

Maintenance and Ownership of Records

a. HRD professionals maintain appropriate confidentiality in creating, storing, accessing, transferring, and disposing of records under their control, whether these are written, automated, or in any other medium. They maintain and dispose of records in accordance with law and in a manner that permits compliance with the requirements of these Standards.

b. HRD professionals make plans in advance so that confidentiality of records and of data considered confidential is protected in the event of an HRD professional's death, incapacity, or withdrawal from the position or consulting practice.

c. Recognizing that ownership of records and data is governed by legal principles, HRD professionals take reasonable and lawful steps so that records and data remain available to the extent needed to serve the best interests of individual and organizational clients, students, or appropriate others.

Disclosures

a. HRD professionals disclose confidential information without the consent of the individual or organization only as mandated by law or where permitted by law for a valid purpose, such as (1) to obtain appropriate professional consultations, (2) to protect the individual or organization from harm, or (3) to obtain payment for services, in which instance disclosure is limited to the minimum that is necessary to achieve the purpose.

b. HRD professionals also may disclose confidential information with the appropriate consent of the individual or organizational client (or of another legally authorized person on behalf of the client).

Consultations

When consulting with colleagues, (1) HRD professionals do not share confidential information that reasonably could lead to the identification of a client, student, or other person or organization with whom they have a confidential relationship, unless they have obtained the prior consent of the person or organization or they cannot avoid the disclosure, and (2) they share information only to the extent necessary to achieve the purposes of the consultation.

Confidential Information in Databases

a. If confidential information concerning recipients of the HRD professional's services is to be entered into databases or systems of records available to persons whose access has not been consented to by the recipient, then HRD professionals use coding or other techniques to avoid the inclusion of personal identifiers.

b. If a research protocol approved by an institutional review board or similar body requires the inclusion of personal identifiers, such identifiers are deleted before the information is made accessible to persons other than those of whom the research subject was advised.

c. If such deletion is not feasible, then before HRD professionals transfer such data to others or review such data collected by others, they take reasonable steps to determine that appropriate consent of personally identifiable individuals has been obtained.

Use of Confidential Information for Didactic or Other Purposes

a. HRD professionals do not disclose in their writings, lectures, or other pubic media any confidential, personally identifiable information that concerns their individual or organizational clients or other recipients of their services and that was obtained during the course of their work, unless the person or organization has consented in writing or unless there is other ethical or legal authorization to do so.

b. Ordinarily, in such professional presentations, HRD professionals disguise confidential information concerning such persons or organizations so that they are not individually identifiable to others and so that discussions do not cause harm to subjects who might identify themselves in a different or later context.

6. Teaching and Facilitating

Design, Development, Implementation, and Evaluation of Programs

HRD professionals must seek to ensure that their programs, or those in which they participate, are competently designed and developed, provide proper exchanges and experiences during implementation, meet the requirements of the objectives made by the program, and are accurately evaluated.

Descriptions of Programs

a. HRD professionals responsible for such programs seek to ensure that there is a current and accurate description of the program content, goals, and objectives and that the requirements for completion or implementation are clearly specified. This information must be made readily available to all interested parties.

b. HRD professionals seek to ensure that statements concerning their course outlines or program objectives are accurate and not misleading, particularly regarding subject matter to be covered or final outcomes to be achieved. Also, the basis for evaluation of progress, successful completion, or successful implementation are clearly identified to avoid false or deceptive statements.

c. To the degree to which they exercise control, HRD professionals responsible for announcements, catalogs, brochures, advertisements, agendas, or proposed interventions that describe workshops, seminars, non-degree-granting programs, degree-granting programs, or proposed deliverables accurately describe the audience and the intended influence or effect on that audience. All fees involved also must be disclosed.

Accuracy, Objectivity, and Professionalism in Programs

a. No data, information, or knowledge presented in a learning environment is distorted, manipulated, or misused.

b. When teaching or training, HRD professionals recognize the power they hold over students, supervisees, and consultees. Therefore, they make reasonable efforts to avoid engaging in conduct that is personally demeaning or harassing, and they do not engage in conduct that demonstrates a lack of respect for others.

Limitation on Training and Instruction

HRD professionals do not train or instruct individuals in the use of techniques or procedures that require certification, licensure, or expertise if those individuals lack the required prerequisite preparation.

Assessment of Performance

a. HRD professionals establish proper processes to provide feedback about individual performance to students, supervisees, or consultees.

b. HRD professionals base the evaluation of students, supervisees, or consultees on each individual's actual performance relevant to the expected requirements.

7. Resolution of Ethical Issues and Violations

Familiarity with Ethics	HRD professionals have an obligation to be familiar with this document, other applicable standards, and the application of ethics to their profession. Lack of awareness or misunderstanding of an ethical standard is not itself an excuse for unethical conduct.
Informal Resolution of Ethical Violations	If informal resolution appears appropriate and if the intervention does not violate any human rights, attempts to resolve such violations should be made by bringing the issue to the attention of the individual involved.
Conflicting Pressure with Organizational Demands	If a conflict arises between these Standards and organizational demands, the HRD professional should consult with a group of peers who will clarify the nature of the conflict, make known their commitment to these Standards, and, to the extent feasible, seek to resolve the conflict in a way that permits the fullest adherence to these Standards.
Improper Complaints	HRD professionals do not file or encourage others to file complaints that are frivolous and/or are intended to harm the person(s) involved rather than protect the public and the profession.
Resolution of Ethical Issues	When an HRD professional is uncertain whether a particular situation or course of action would violate this document, he or she should consult with other professionals knowledgeable about ethical issues, with the AHRD Ethics Committee, or with other appropriate authorities in order to choose a proper course of action. The AHRD Ethics Committee operates as an advisory group only.
Cooperation with Ethics Committees	HRD professionals cooperate in ethics investigations, proceedings, and the resulting activities of any professional organization involved with performance improvement, training, instruction, or learning. In so doing, they make reasonable efforts to help resolve any issue in a violation of ethics. Failure to cooperate is itself an ethics violation.